

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	PLAN	DATE	SHEET NO.
57	*	PROPOSED	127	101
PROJECT NO.				125-SHEETS
* (38-5)RS-1				

GENERAL NOTES

All structural steel shall be AASHTO M 270 Grade 36 unless otherwise noted.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Prior to pouring the new concrete for the deck, all loose rust, loose mill scale, and all other loose, detrimental foreign material shall be removed from the portions of flanges of beams or girders in contact with concrete. The removal shall be accomplished with appropriate power hand tools. Cost shall be included in "Concrete Removal."

The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.

All Structural steel shall be shop painted with inorganic zinc rich primer per AASHTO M300, Type 1. The cost shall be included in "Furnishing and Erecting Structural Steel."

Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50 degrees Fahrenheit.

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42, OR M-53 grade 60.

Existing longitudinal reinforcement, extending into the removal area, shall be cut 2 feet from the removal line, cleaned and straightened. New longitudinal reinforcement bars shall be lapped with existing reinforcement.

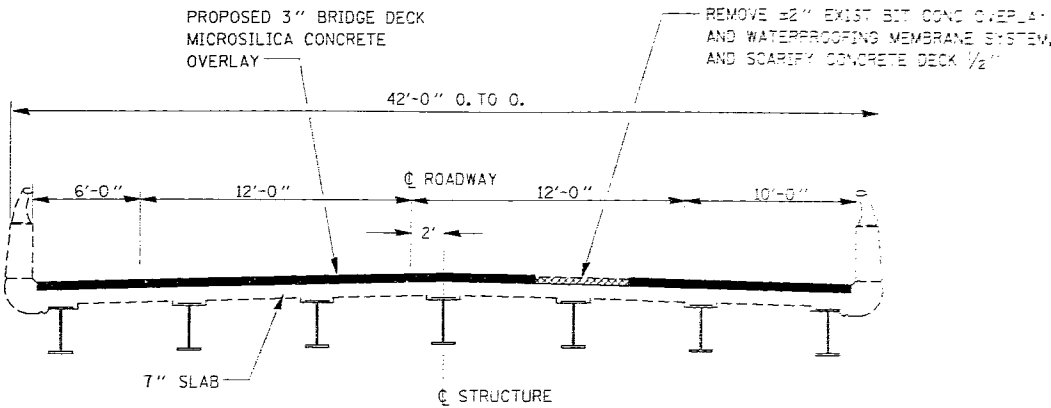
Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. This work shall be included in the cost of "Concrete Removal."

Removal of existing expansion angles shall be included in the cost of "Concrete Removal."

The limits of all concrete removal shall be saw cut prior to removal. The depth of saw cut shall be 1 1/4" unless shown elsewhere in the plans.

Sloped wall shall be reinforced with welded wire fabric, 6"x6" W4.0xW4.0, weighing 58 lbs. per 100 sq. ft.

Existing structural steel shall only be cleaned as required by the Special Provision "Cleaning and Painting Adjacent Areas of Existing Steel Structures."



CROSS SECTION

LOOKING NORTH
SN 038-0007

TOTAL BILL OF MATERIALS	
ITEM	QUANTITY
BRIDGE DECK GROOVING	460 SQ YD
BIT CONC REMOVAL (DECK)	460 SQ YD
CONC BR DECK SCARIFICATION (1/2 INCH)	460 SQ YD
BRIDGE DECK MICROSILICA CONC OVERLAY	460 SQ YD
DECK SLAB REPAIR (PARTIAL DEPTH)	40 SQ YD
DECK SLAB REPAIR (FULL DEPTH, TYPE D)	5 SQ YD
FILTER FABRIC FOR USE WITH RIPRAP	5 SQ YD
EPOXY CRACK SEALING	18 FOOT
SLOPEWALL REMOVAL	25 SQ YD
SLOPEWALL 4 INCH	25 SQ YD
STONE DUMPED RIPRAP, CLASS A4	5 SQ YD
CONCRETE REMOVAL	55 CU YD
CONCRETE SUPERSTRUCTURE	55 CU YD
REINF BARS, EPOXY COATED	10,420 LBS
BAR SPLICERS	92 EACH
SLOPEWALL SLURRY PUMPING	40 CU YD
FLOOR DRAIN EXTENSIONS	8 EACH
JACK AND REMOVE EXISTING BEARINGS	14 EACH
ELASTOMERIC BEARING ASSEMBLY, TY 1	14 EACH
SILICONE JOINT SEALER	84 FOOT
FURNISHING & ERECTING STRUCTURAL STEEL	2250 LBS
TEMPORARY SHEET PILING	448 SQ FT
STUD SHEAR CONNECTORS	588 EACH
POLYMER CONCRETE	9 CU FT
POROUS GRANULAR EMBANKMENT	100 CU YD
BRIDGE APPROACH PAVEMENT	267 SQ YD
APPROACH SLAB REMOVAL	356 SQ YD
BRIDGE APPROACH PAVEMENT CONNECTOR (PCO)	89 SQ YD
PLUG EXISTING DECK DRAINS	12 EACH
PROTECTIVE COAT	460 SQ YD
STRUCTURE EXCAVATION	100 CU YD

STRUCTURE REHABILITATION
FAI 57 (RTE 57)
SECTION (38-5)RS-1
IROQUOIS COUNTY
S.N. 038-0007
STA. 585 + 10.21

DESIGNED	19
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	ENGINEER OF BRIDGES AND STRUCTURES

PLATE NO.	SECTION	COUNTY	127	102	SHEET NO. 2
S.E. 1/4	*	ILLINOIS	127	102	12 SHEETS
57					
FED. ROAD DIST. NO.					

10'-0"

42'-0"

1'-0"

BACK OF ABUTMENT

10 - #5 d₁(E) @ 12" CTS.

10 - #5d(E) @ 12" CTS., PLUS
2 ADDITIONAL d BARS AT EACH RAILPOST

23 - #7 d₁(E) @ 5" CTS.
TOP & BOTTOM

56 - #5 d₂(E) @ 9" CTS. TOP

23 BAR SPLICERS
TOP & BOTTOM

26 - #5 b(E) @ 18" CTS. - TOP

58 - #5 b(E) @ 8" CTS. - BOTTOM (SEE CROSS SECTION)

23 - #7 d(E) @ 5" CTS.
TOP & BOTTOM

6 - #5 e(E) @ 10" CTS.

32'-1 1/2"

19'-7"

103'-5" END TO END OF SLAB

CL ROADWAY

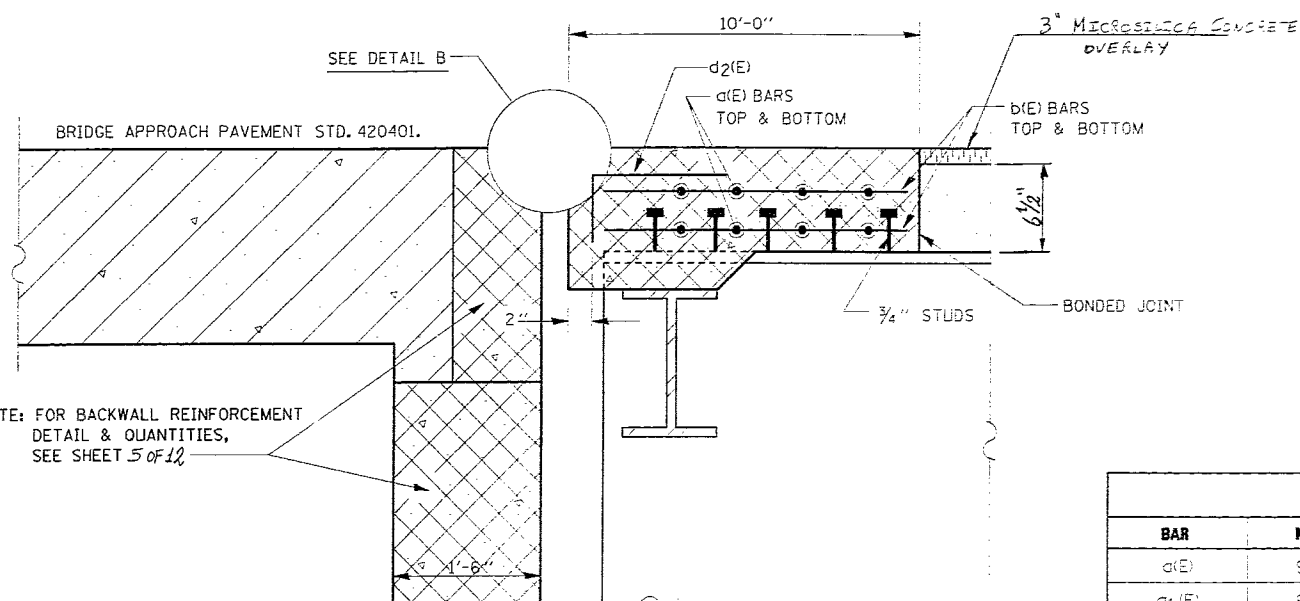
CL SUPERSTRUCTURE

CL PIER BEARINGS

SYMM. ABOUT
CL BRIDGE

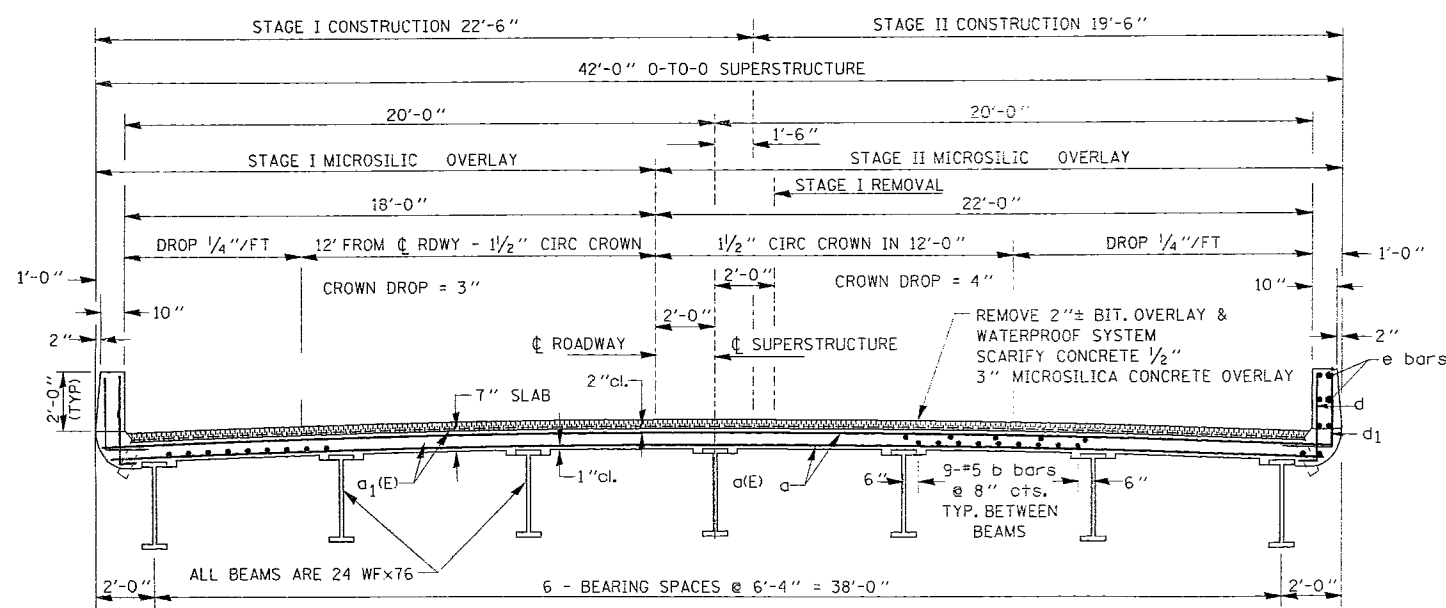
JOINT

 AREA OF DECK & PARAPET
TO BE REMOVED & REPLACED



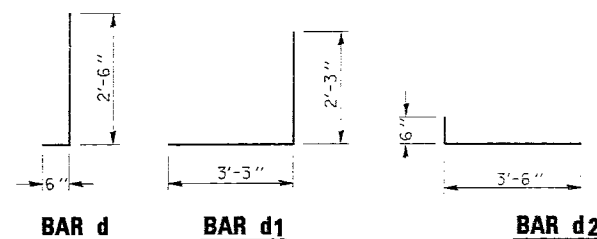
 AREA OF PAVEMENT REMOVAL

 AREA OF CONCRETE REMOVAL



NEAR MIDSPAN

(LOOKING NORTH - S.N. 038-0007)

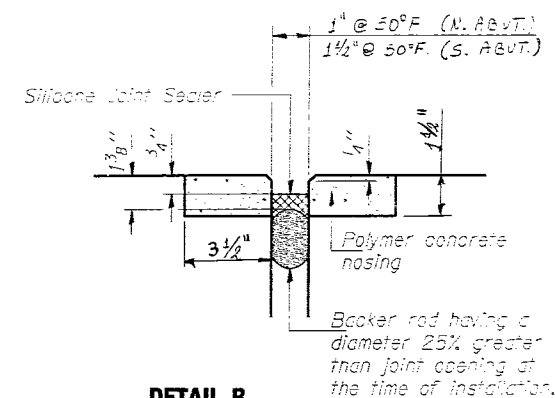


DETAIL B

BILL OF MATERIALS				
BAR	NO.	SIZE	LENGTH	SHAPE
d(E)	92	#7	13'-4"	_____
d1(E)	92	#7	23'-4"	_____
b(E)	168	#5	9'-6"	_____
d(E)	56	#5	3'-0"	_____
d1(E)	40	#5	3'-6"	_____
d2(E)	112	#5	4'-0"	_____
e(E)	24	#5	9'-6"	_____
BAR SPLICERS			92 EACH	
POLYMER CONCRETE			9 CU FT	
CONCRETE REMOVAL *			22 CU YD	
REINFORCEMENT BARS, EPOXY COATED			10,420 LBS	
CONCRETE SUPERSTRUCTURE *			22 CU YD	
SILICONE JOINT SEALER			64 FOOT	
STUD SHEAR CONNECTORS			688 EACH	

* QUANTITIES ARE FOR THE DECK SIDE ONLY
(SEE OTHER SHEET FOR BACKWALL & OTHER SIDE OF JOINT)

NOTE: REINFORCEMENT BARS DESIGNATED "B"
SHALL BE EPOXY COATED.



STRUCTURE REHABILITATION
FAI 57 (RTE 57)
SECTION (38-5)RS-1
IROQUOIS COUNTY
S.N. 038-0007
STA. 585 + 10.21

MAR. 24, 2000
ERO2000\BROCEDET JCN

* (38-5482-1

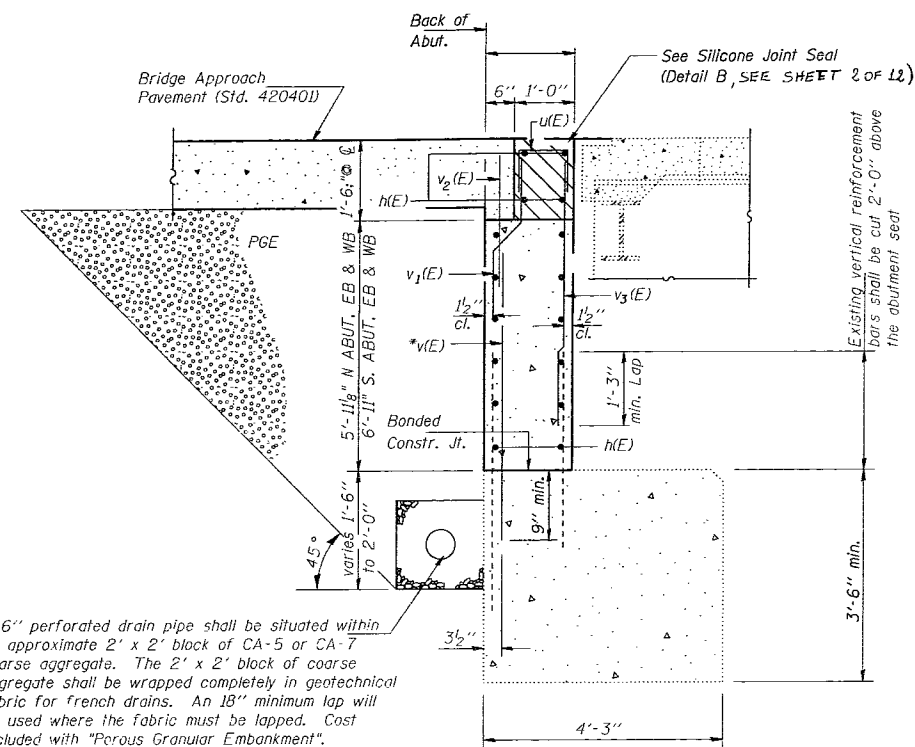
MAR. 23, 2000
FPO2099\BRODGET DGN

51, 2000 1991 BRIDGE DET. DON	DESIGNED	19
	CHECKED	EXAMINED
	DRAWN	ENGINEER OF BRIDGE DESIGN
	CHECKED	PASSED
		ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.
57	*	IROQUOIS	127
105			12 SHEETS

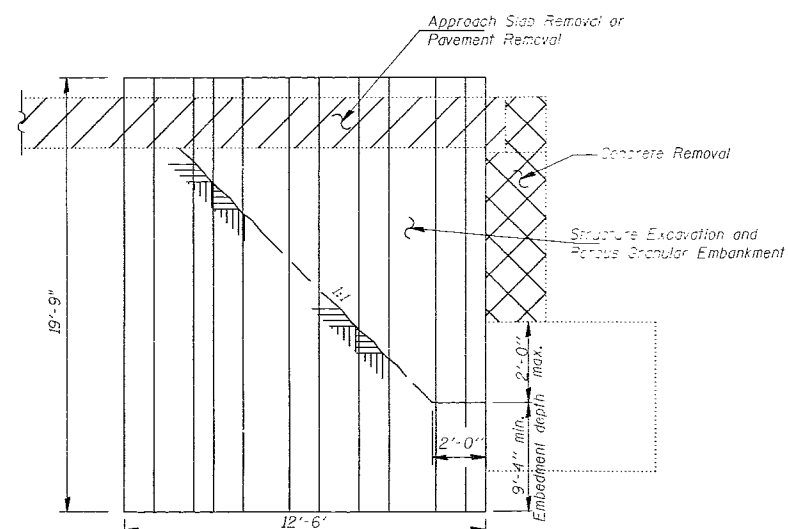
*(38-5)RS-1



SEC. THRU PROPOSED ABUT.

* DRILL AND GROUT v(E) BAR IN 1" Ø X 9" (MIN.) DRILLED HOLES ACCORDING TO SECTION 584 OF THE STANDARD SPECIFICATIONS. COST INCLUDED IN COST OF "REINFORCEMENT BARS, EPOXY COATED".

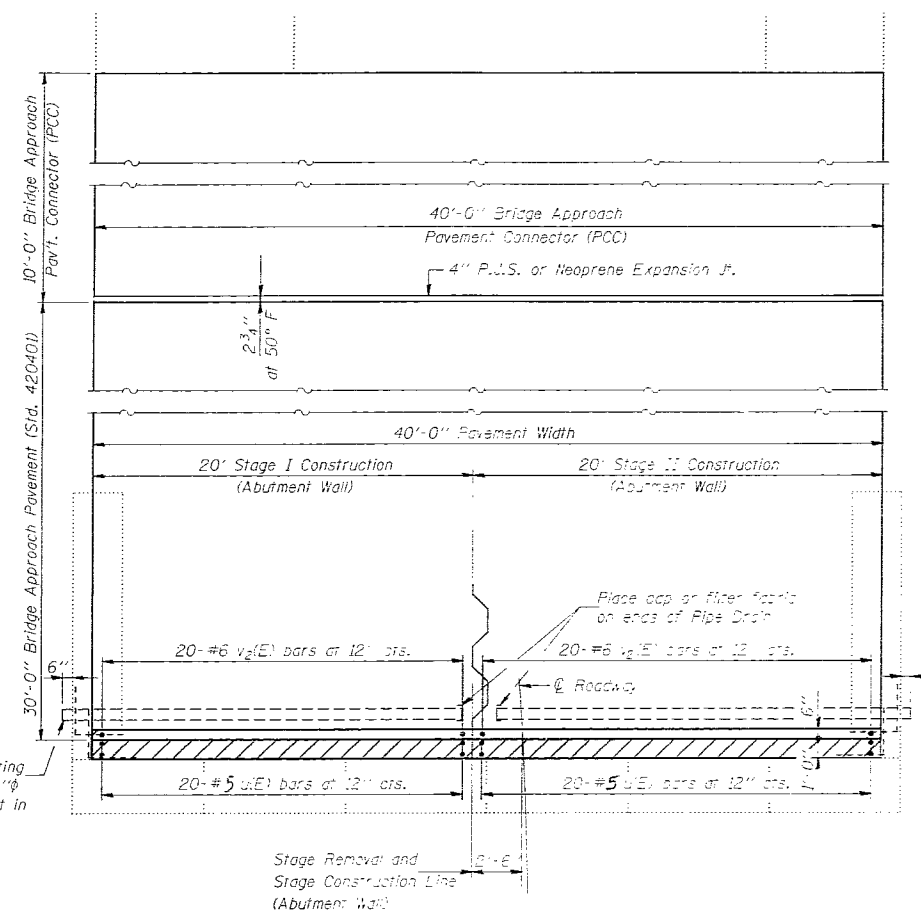
NOTE: Hatched area shall be poured after forms for the remaining part of the abutment have been removed.



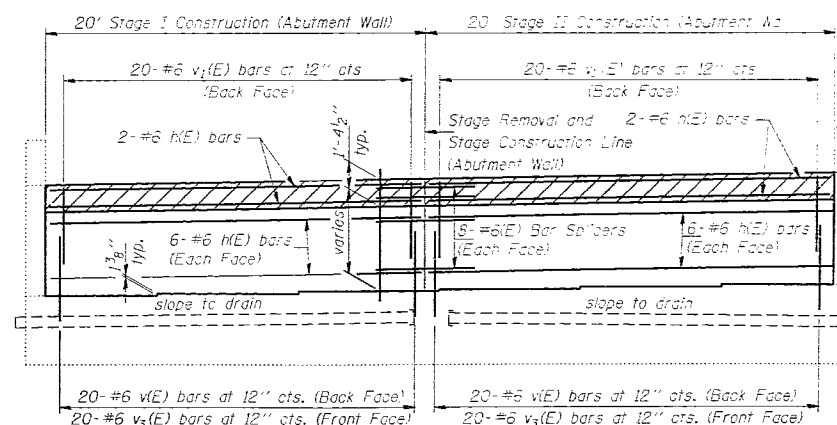
SHEET PILING DETAIL

Sheet Piling minimum section modulus = 9.1 cu. in./ft. of wall. If the Contractor chooses, after the porous granular embankment has been placed behind the abutment wall constructed during Stage II, the sheet piling may be cut at an elevation 6" below the proposed Approach Pavement and left in place.

NOTE: "If the contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans for lesser design requirements, then full design submittals with the required seals will be expected by the Department, for review and approval."



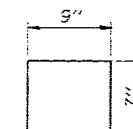
PROPOSED PLAN



PROPOSED ELEVATION



BAR v1



BAR u

BILL OF MATERIAL

Bar No.	Size	Length	Shape
v1(E)	#6	5'-6"	
v2(E)	#6	4'-3"	
v3(E)	#6	2'-8"	
v4(E)	#6	6'-4"	
u(E)	#5	18'-6"	
Concrete Retardant		20.15	16.5
Concrete Superstructure		20.15	16.5
Reinforcement Bars		Lbs.	2200
Epoxy Coated			
Bar Spacers		Each	18
Porous Granular Embankment		cu. yd.	50
Temporary Sheet Piling		Sq. Ft.	2-6
STRUCTURE EXCAVATION		cu. yd.	50

Reinforcement bars designated (E) shall be epoxy coated.

STRUCTURE REHABILITATION
BACKWALL REPLACEMENT
SOUTH ABUTMENT
FAI 57 (RTE 57)
SECTION (38-5)RS-1
IROQUOIS COUNTY
S.N. 038-0007
STA. 585+10.21

DESIGNED	
CHECKED	
DRAWN	
CHECKED	

EXAMINED	19
PASSED	ENGINEER OF BRIDGE DESIGN
	ENGINEER OF BRIDGES AND STRUCTURES

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
S.A. P.A.	57 *	ILLINOIS	127	108
FEDERAL HIGHWAY DIST. NO. 1 DIVISION PROJECT				

* (38-5)PS-1



EPOXY CRACK SEALING = 7'

A diagram of a rectangular prism. The height is labeled as 3'-6". The length of the top edge is labeled as 5'. The width of the front edge is labeled as 2'. The prism is shown in a perspective view with a top face, a front face, and a right side face.

SOUTH ABUTMENT & BACKWALL

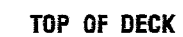
EPOXY CRACK SEALING = 11'



 SLOPEWALL
SLURRY PUMPING = 20 CU YD



 SLOPEWALL
SLURRY PUMPING = 20 CU YD



 DECK SLAB REPAIR (FULL DEPTH, TYPE D) = 5 SQ YD

BILL OF MATERIALS	
ITEM	QUANTITY
DECK SLAB REPAIR (PARTIAL DEPTH)	40 SQ YD
DECK SLAB REPAIR (FULL DEPTH, TYPE 1)	5 SQ YD
EPOXY CRACK SEALING	18 FOOT
STONE DUMPED RIPRAP, CLASS A4	5 SQ YD
FILTER FABRIC FOR USE WITH RIPRAP	5 SQ YD
SLOPEWALL SLURRY PUMPING	40 CU YD
SLOPEWALL REMOVAL	25 SQ YD
SLOPEWALL 4"	25 SQ YD

STRUCTURE REHABILITATION
FAI 57 (RTE 57)
SECTION (38-5)RS-1
IROQUOIS COUNTY
S.N. 038-0007
STA. 585 + 10.21

NOTE

Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs in "As Built" plans.

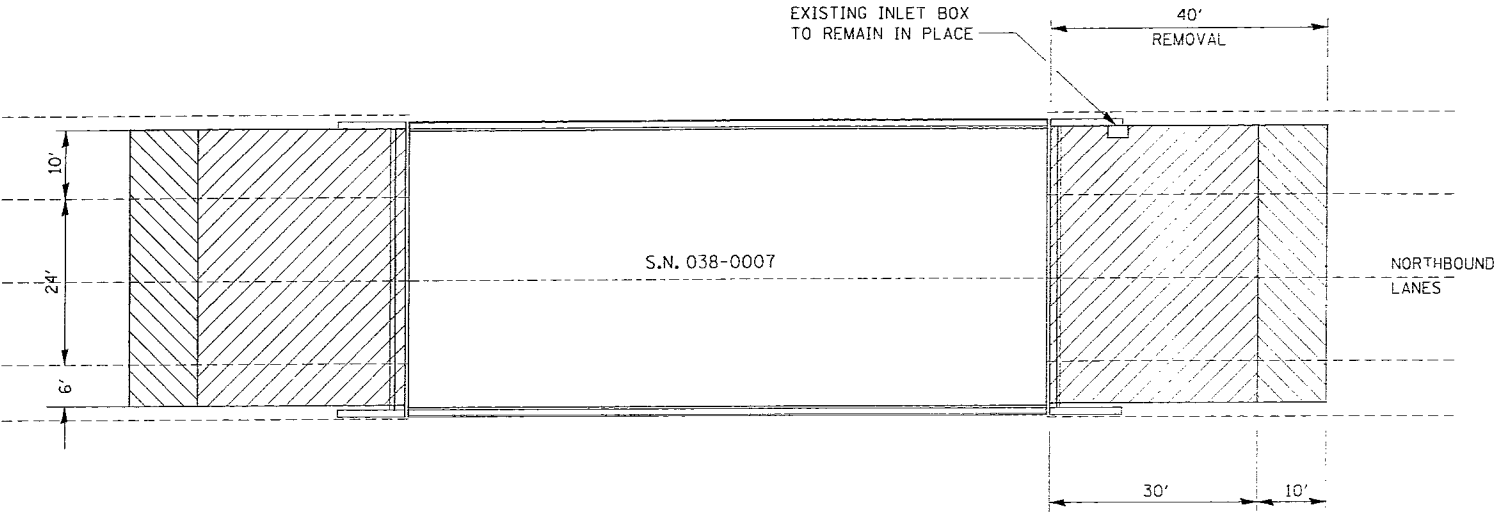
DATE OF SURVEY 01-10-00

MAR. 23. 2000
FPO2099\BRODGEDET.DGN

DESIGNED	19
CHECKED	EXAMINED
DRAWN	ENGINEER OF BRIDGE DESIGN
CHECKED	ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	POST	SHEET NO. 7
57	*	IROQUOIS	127	107	12 SHEETS
PROJECT NO. 138-5/RS-1					



LEGEND

	BRIDGE APPROACH PAVEMENT
	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)

PLAN

NOTE: SAWCUT AROUND THE EXISTING DRAIN, DRILL NEW HOLES AND EPOXY GROUT NEW BARS INTO THE INLET BOX. COST SHALL BE INCIDENTAL TO "APPROACH SLAB REMOVAL."

BILL OF MATERIALS	
ITEM	QUANTITY
BRIDGE APPROACH PAVEMENT	267 SQ. YD.
APPROACH SLAB REMOVAL	356 SQ. YD.
BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	69 SQ. YD.
BAR SPLICERS	62 EACH

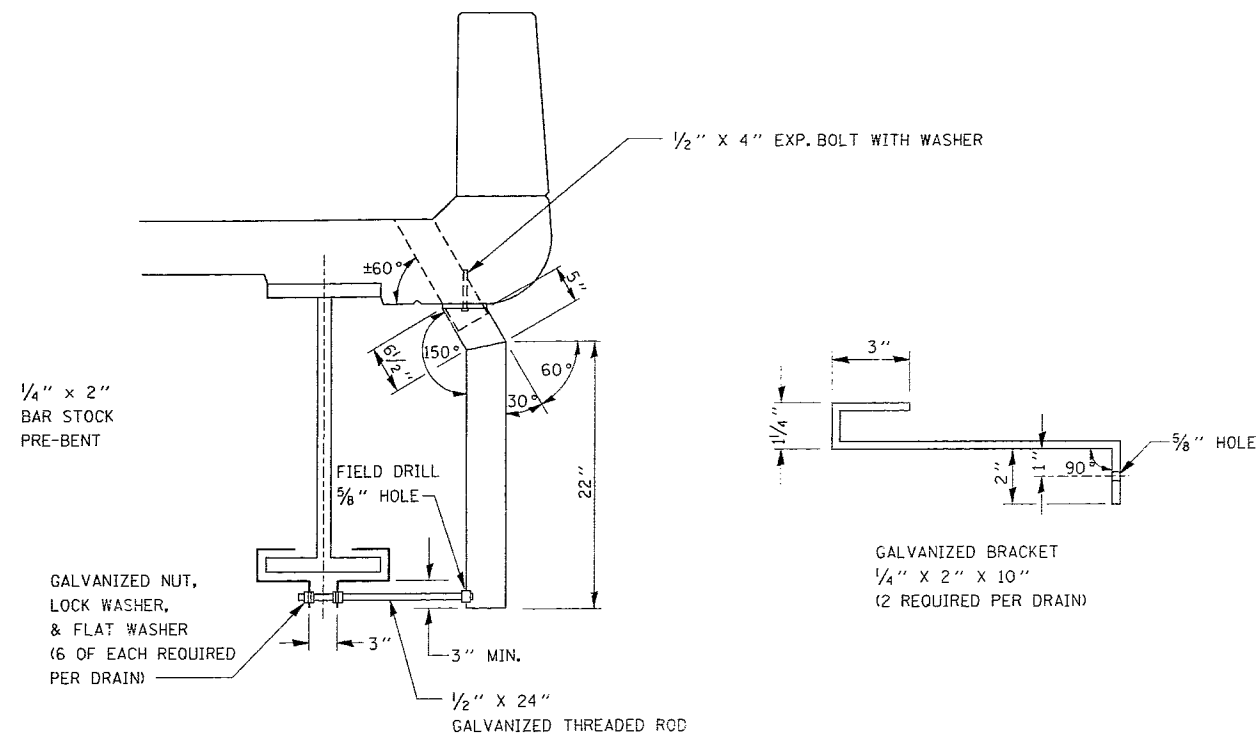
DESIGNED	19
CHECKED	
DRAWN	
CHECKED	

EXAMINED	ENGINEER OF BRIDGE DESIGN
PASSED	ENGINEER OF BRIDGES AND STRUCTURES

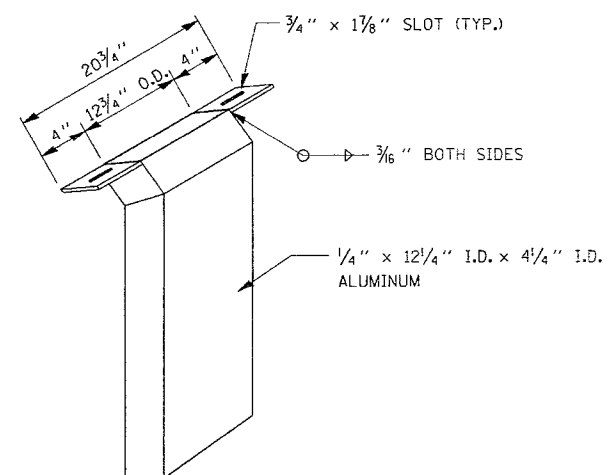
STRUCTURE REHABILITATION
FAI 57 (RTE 57)
SECTION (38-5)RS-1
IROQUOIS COUNTY
S.N. 038-0007
STA. 585 + 10.21

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

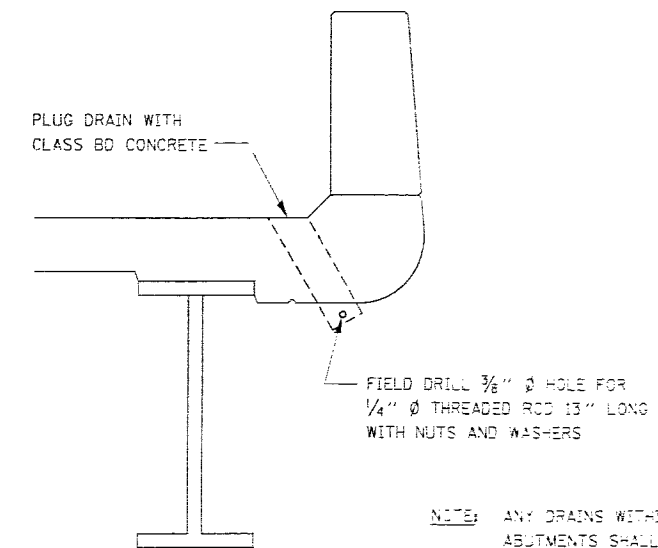
ROUTE NO.	SECTION	COUNTY	PROJECT	SHEET NO.
57	*	IROQUOIS	127	108
SHEET NO. 8				12 SHEETS
* (38-5)RS-1				



BRACKET DETAIL



DECK DRAIN EXTENSION



NOTE: ANY DRAINS WITHIN 10' OF THE PIERS AND ABUTMENTS SHALL BE ELIMINATED. SPACING BETWEEN DRAINS SHALL BE DOUBLED BY PLUGGING EVERY OTHER EXISTING DRAIN.

**SECTION AT DRAIN
DRAIN ELIMINATION DETAIL**

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
FLOOR DRAIN EXTENSIONS	EA	8
PLUG EXISTING DECK DRAINS	EA	12

DESIGNED	19
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	ENGINEER OF BRIDGES AND STRUCTURES

ENGINEER OF BRIDGE DESIGN

ENGINEER OF BRIDGES AND STRUCTURES

STRUCTURE REHABILITATION
FAI 57 (RTE 57)
SECTION (38-5)RS-1
IROQUOIS COUNTY
S.N. 038-0007
STA. 585 + 10.21

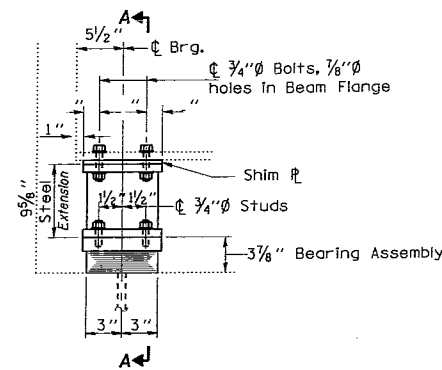
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
57	*	PRODUCTIONS	127 109	12 SHEETS

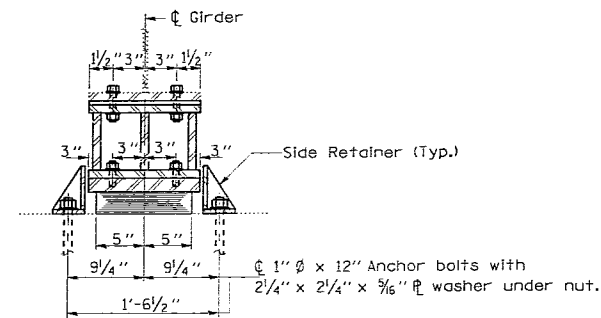
GIRDER REACTIONS

R ₁	(K)	11.1
R ₂	(K)	27.4
Imp.	(K)	8.2
R (Total)	(K)	46.7

* (38-5)RS-1

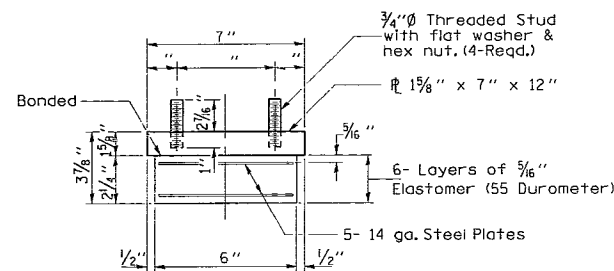


ELEVATION AT
SOUTH ABUTMENT



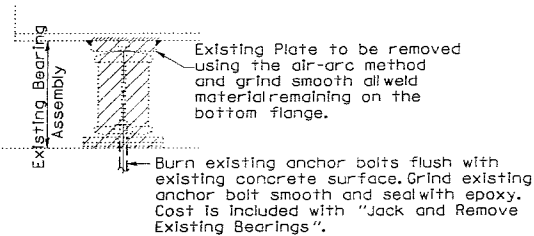
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

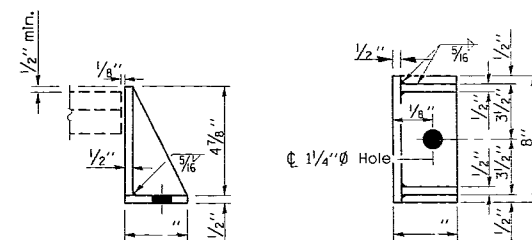


BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



EXISTING BEARING REMOVAL DETAIL

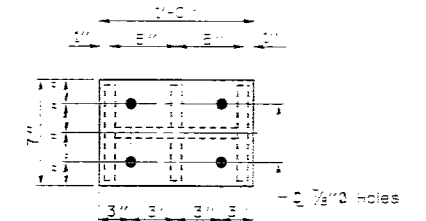


SIDE RETAINER

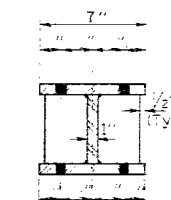
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Notes: Diaphragm removal and replacement may be required to facilitate drilling holes. Cost shall be included in the cost of "Furnishing and Erecting Structural Steel".
New steel extensions, side retainers, shim P's, connection bolts, and anchor bolts are included in "Furnishing and Erecting Structural Steel".
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
Min. Jack capacity = 22 Tons
Two 1/8" shims of the dimensions of the top extension plate shall be provided for each bearing in addition to all other plates or shims.

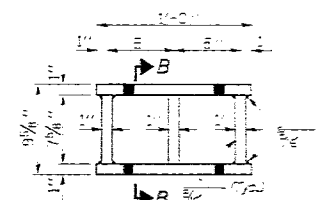
See Sheet 12 of 12 for Anchor Bolt Installation.



PLAN TOP AND BOTTOM PLATE



SECTION B-B



STEEL EXTENSION DETAIL

ADDITIONAL SOLID 1 PIECE SHIMS REQUIRED

Beam #1	2	3	4	5	6	7
0	0	1/4"	1/8"	0	0	0

BEAM	1	2	3	4	5	6	7

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly (Type I)	Each	
Furnishing & Erecting Structural Steel	lb.	150
Jack & Remove		
Exist. Bearings	Each	

TYPE I
BEARING REPLACEMENT
SOUTH ABUTMENT
S.N. 038-0007
STA. 585 + 10.21

DESIGNED	
CHECKED	
DRAWN	
CHECKED	

EXAMINED	19
PASSED	ENGINEER OF BRIDGE DESIGN
	ENGINEER OF BRIDGES AND STRUCTURES

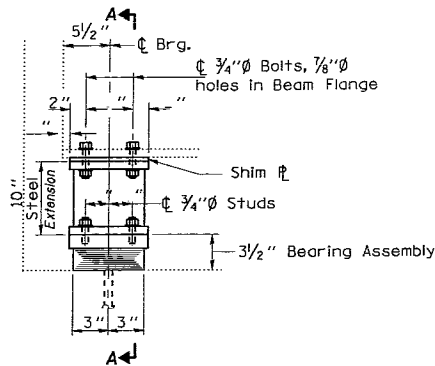
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	DATE	REV	SHEET NO. 10
57	*	1/27	110	12 SHEETS

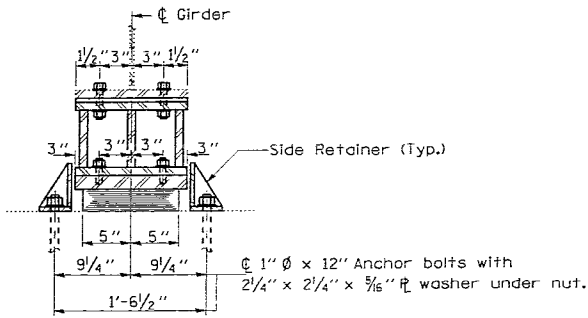
GIRDER REACTIONS

RE	(K)	11.1
RL	(K)	27.4
Imp.	(K)	8.2
R (Total)	(K)	46.7

*(36-5)RS-1

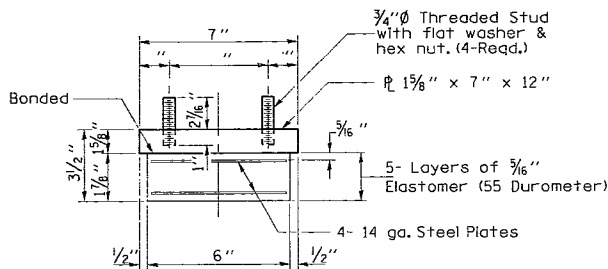


ELEVATION AT
NORTH ABUTMENT



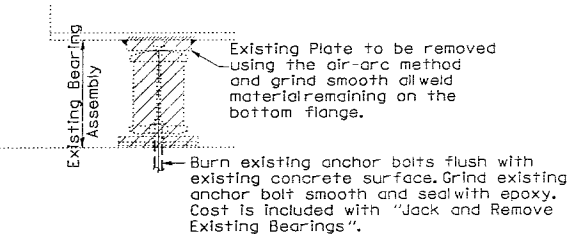
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

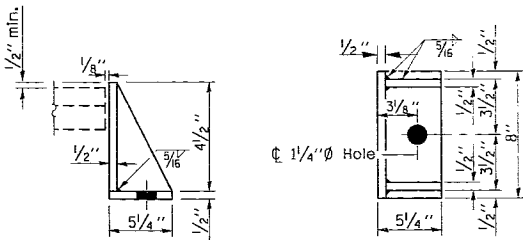


BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



EXISTING BEARING REMOVAL DETAIL

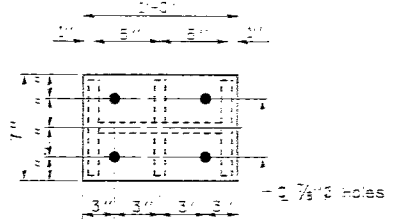


SIDE RETAINER

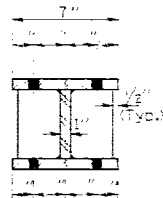
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

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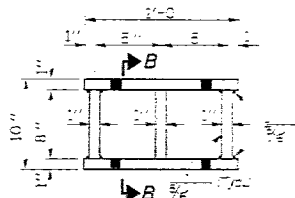
See Sheet 11 of 12 for Anchor Bolt Installation.



PLAN TOP AND BOTTOM PLATE



SECTION B-B



STEEL EXTENSION DETAIL

ADDITIONAL SOLID 1 PIECE SHIMS REQUIRED							
Beam #1	2	3	4	5	6	7	
0	0	1/4	1/8	0	0	0	

BEAM	1	2	3	4	5	6	7

BILL OF MATERIAL		
Item	Unit	Total
Elastomeric Bearing	Each	
Assembly Type I	Each	
Furnishing & Erecting		
Structural Steel	Sq. Ft.	
Jack & Remove	Each	
Exist. Bearings	Each	

TYPE I
BEARING REPLACEMENT
NORTH ABUTMENT
S.N. 038-0007
STA. 585 + 10.21

DESIGNED	19
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEETS
57	*	IROQUOIS	127	111
SHEET NO. 11				
12 SHEETS				

*(38-5)RS-1
NOTES

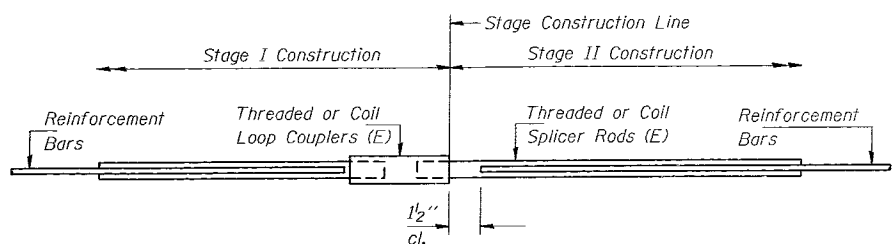
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or rolled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_s$
② Minimum Pull-out Strength (Tension in kips) = $1.25 \times f_{allow} \times A_s$

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 f_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi. Service Load
 A_s = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

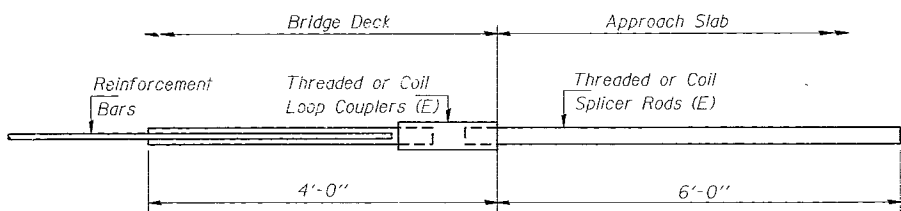
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity (kips - tension)	Min. Pull-Out Strength (kips - tension)
#3	2'-0"	23.0	9.2
#4	2'-7"	33.0	13.3
#5	3'-5"	45.0	18.0
#6	4'-6"	65.0	25.6

Bar splicer assemblies shall be according to Section 805 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price given for BAR SPLICERS.



SPLICER DETAIL

Bar Size	No. Assemblies Required	Location
#6	64	DECK SIDE OF JOINT
#6	16	APPROACH SIDE OF JOINT
#4	8	APPROACH PVMT & PAD
#5	54	APPROACH PVMT & PAD



**INTEGRAL ABUTMENT
BAR SPLICER ASSEMBLY DETAIL
FOR #5 BAR**

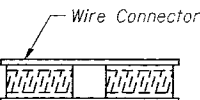
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =

The diameter of this part is the same as the diameter of the bar spliced.

ROLLED THREAD DOWEL BAR



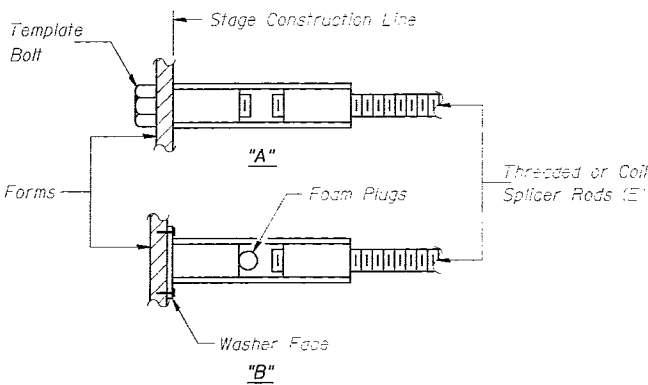
**** ONE PIECE**



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.

DESIGNED
CHECKED
DRAWN
CHECKED

BSD-1 4-30-99

EXAMINED	19
PASSED	ENGINEER OF BRIDGE DESIGN
	ENGINEER OF BRIDGES AND STRUCTURES

STRUCTURE REHABILITATION
FAI 57 (RTE 57)
SECTION (38-5)RS-1
IROQUOIS COUNTY

BAR SPLICER ASSEMBLY DETAILS

S.N. 038-0007
STA. 585 + 10.21

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* (38-5)PS-1

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown in accordance to the manufacturer's recommendation after beams or plates have been erected and aligned.

Prior to setting the bolts, the steel shall be dry, and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed and including the epoxy grout in capsules shall not be paid for separately, but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel."

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the deck fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
ABUTMENT	A307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.



ILLINOIS COIL-LOCK ANCHOR BOLT

DESIGNED
CHECKED
DRAWN
CHECKED

ABB-1 4-30-99

19

EXAMINED

PASSED

ENGINEER OF BRIDGE DESIGN

ENGINEER OF BRIDGES AND STRUCTURES

STRUCTURE REHABILITATION
FAI 57 (RTE 57)
SECTION (38-5)RS-1
IROQUOIS COUNTY

ANCHOR BOLT DETAILS
FOR BEARINGS

S.N. 038-0007
STA. 585+10.21

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	LENGTH	DATE	POST	SHEET NO.
57	*	IROQUOIS 127	113		128-SHEETS
FELP HAS DESIGN & Y					

*38-5RS-1

GENERAL NOTES

All structural steel shall be AASHTO M 270 Grade 36 unless otherwise noted.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Prior to pouring the new concrete for the deck, all loose rust, loose mill scale, and all other loose, detrimental foreign material shall be removed from the portions of flanges of beams or girders in contact with concrete. The removal shall be accomplished with appropriate power hand tools. Cost shall be included in "Concrete Removal."

The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.

All Structural steel shall be shop painted with inorganic zinc rich primer per AASHTO M300, Type 1. The cost shall be included in "Furnishing and Erecting Structural Steel."

Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50 degrees Fahrenheit.

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42, OR M-53 grade 60.

Existing longitudinal reinforcement, extending into the removal area, shall be cut 2 feet from the removal line, cleaned and straightened. New longitudinal reinforcement bars shall be lapped with existing reinforcement.

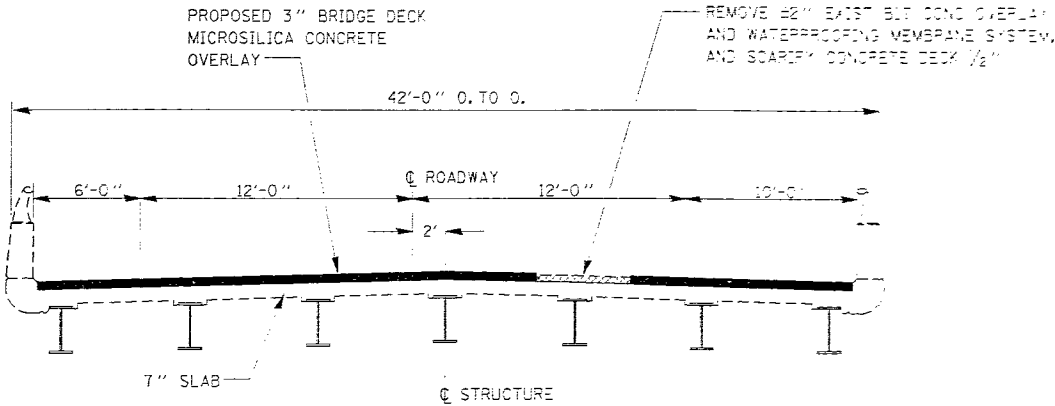
Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. This work shall be included in the cost of "Concrete Removal."

Removal of existing expansion angles shall be included in the cost of "Concrete Removal."

The limits of all concrete removal shall be saw cut prior to removal. The depth of saw cut shall be 3/4" unless shown elsewhere in the plans.

Sloped wall shall be reinforced with welded wire fabric, 6"x6" W4.0xW4.0, weighing 58 lbs. per 100 sq. ft.

Existing structural steel shall only be cleaned as required by the Special Provision "Cleaning and Painting Adjacent Areas of Existing Steel Structures."



CROSS SECTION

LOOKING SOUTH
SN 038-0008

TOTAL BILL OF MATERIALS	
ITEM	QUANTITY
BRIDGE DECK GROOVING	460 SQ YD
BIT CONC REMOVAL (DECK)	460 SQ YD
CONC BR DECK SCARIFICATION (1/2 INCH)	460 SQ YD
BRIDGE DECK MICROSILICA CONC OVERLAY	460 SQ YD
DECK SLAB REPAIR (PARTIAL DEPTH)	35 SQ YD
DECK SLAB REPAIR (FULL DEPTH, TYPE 1)	5 SQ YD
FILTER FABRIC FOR USE WITH RIPRAP	6 SQ YD
EPOXY CRACK SEALING	9 FOOT
SLOPEWALL REMOVAL	66 SQ YD
SLOPEWALL 4 INCH	66 SQ YD
STONE DUMPED RIPRAP, CLASS A4	6 SQ YD
CONCRETE REMOVAL	55 CU YD
CONCRETE SUPERSTRUCTURE	55 CU YD
REINF BARS, EPOXY COATED	10,420 LBS
BAR SPLICERS	92 EACH
SLOPEWALL SLURRY PUMPING	95 CU YD
FLOOR DRAIN EXTENSIONS	8 EACH
JACK AND REMOVE EXISTING BEARINGS	14 EACH
ELASTOMERIC BEARING ASSEMBLY, TY 1	14 EACH
SILICONE JOINT SEALER 2 1/2"	84 FOOT
FURNISHING & ERECTING STRUCTURAL STEEL	2250 LBS
TEMPORARY SHEET PILING	446 SQ FT
PLUG EXISTING DECK DRAINS	12 EACH
POROUS GRANULAR EMBANKMENT	100 CU YD
POLYMER CONCRETE	9 CU FT
STUD SHEAR CONNECTORS	588 EACH
BRIDGE APPROACH PAVEMENT	267 SQ YD
APPROACH SLAB REMOVAL	356 SQ YD
BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	89 SQ YD
PROTECTIVE COAT	460 SQ YD
STRUCTURE EXCAVATION	100 CU YD

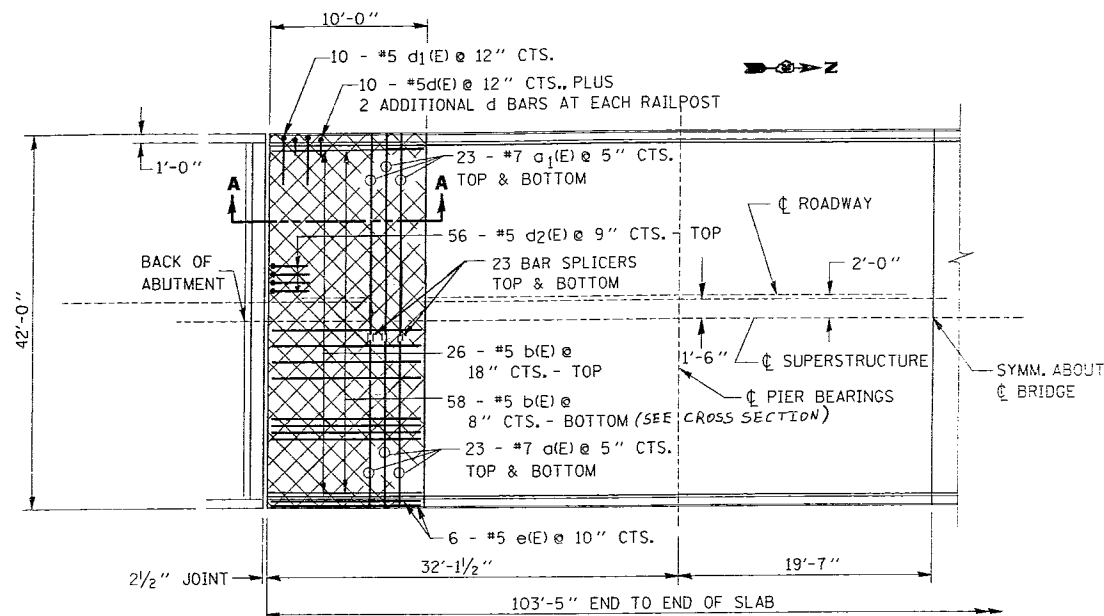
STRUCTURE REHABILITATION
FAI 57 (RTE 57)
SECTION (38-5)RS-1
IROQUOIS COUNTY
S.N. 038-0008
STA. 585+10.21

DESIGNED	
CHECKED	
DRAWN	
CHECKED	

19
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 2
FAI 57 * IROQUOIS 127 114 12 SHEETS

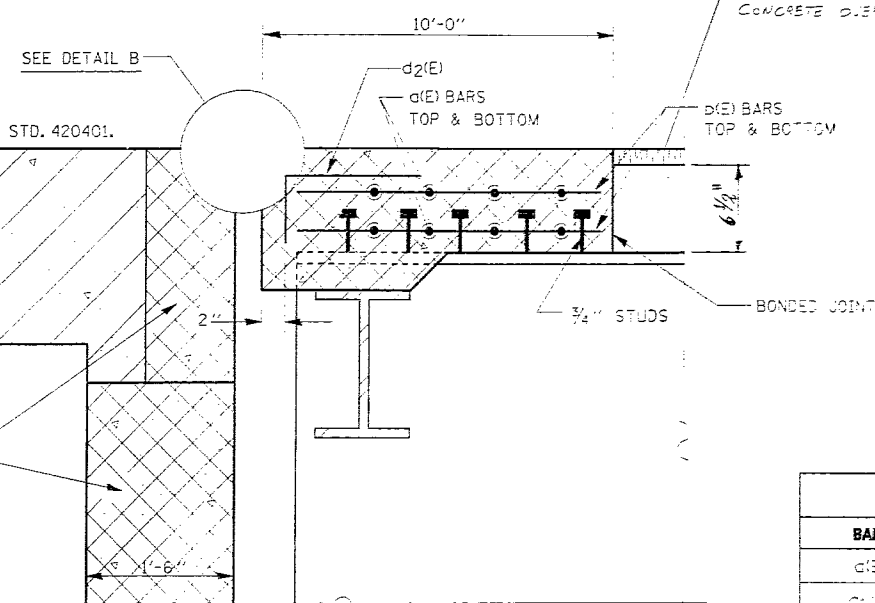


PLAN

AREA OF DECK & PARAPET
TO BE REMOVED & REPLACED

SEE DETAIL B

NOTE: FOR BACKWALL REINFORCEMENT
DETAIL & QUANTITIES,
SEE SHEET 5 of 12

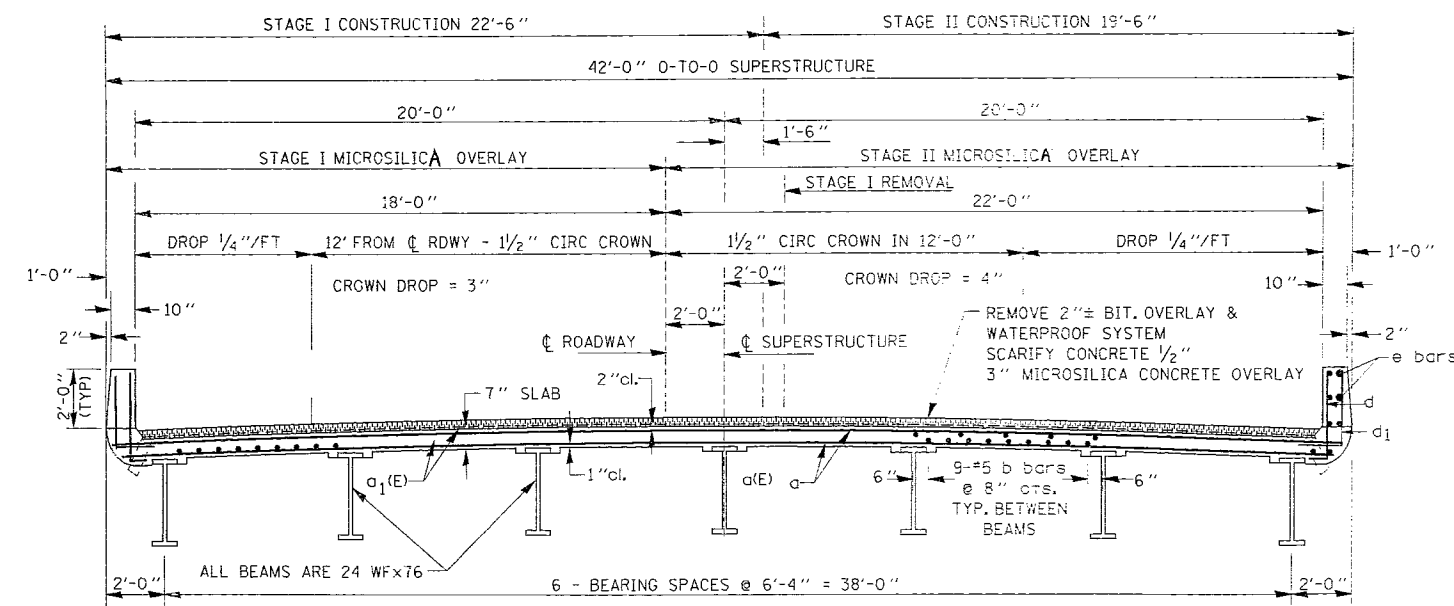


SECTION A-A

AREA OF PAVEMENT REMOVAL
AREA OF CONCRETE REMOVAL



DETAIL B



CROSS SECTION

(LOOKING SOUTH - S.N. 038-0008)

NEAR MIDSPAN

BILL OF MATERIALS				
BAR	NO.	SIZE	LENGTH	SHAPE
d1E	92	#7	13'-4"	
d1E	92	#7	20'-4"	
d1E	168	#5	3'-6"	
d1E	88	#5	3'-0"	
d1E	40	#5	3'-6"	
d2E	112	#5	4'-0"	
a1E	24	#5	3'-6"	
BAR SPLICERS				
				82 EACH
POLYMER CONCRETE				8 CU. FT.
CONCRETE REMOVAL *				22 CU. YD.
REINFORCEMENT BARS, EPOXY COATED				10,480 LBS.
CONCRETE SUPERSTRUCTURE *				22 CU. YD.
SILICONE JOINT SEALER 2 1/2"				84 FOOT
STUD SHEAR CONNECTORS				888 EACH

* QUANTITIES ARE FOR THE DECK SIDE ONLY
(SEE OTHER SHEET FOR BACKWALL & OTHER SIDE OF JOINT)

NOTE: REINFORCEMENT BARS DESIGNATED "E"
SHALL BE EPOXY COATED.

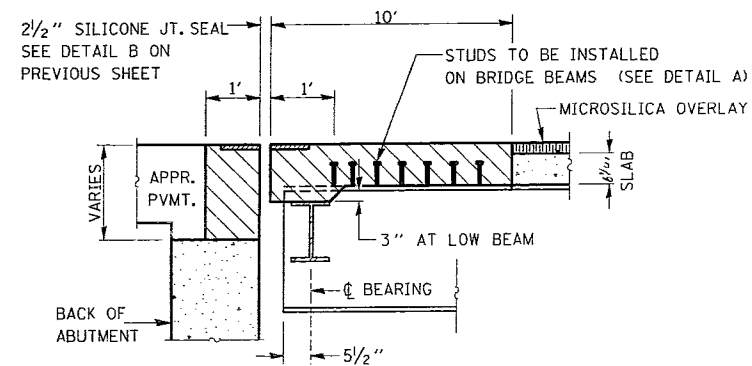
STRUCTURE REHABILITATION
FAI 57 (RTE 57)
SECTION (38-5)RS-1
IROQUOIS COUNTY
S.N. 038-0008
STA. 585 + 10.21

DESIGNED	19
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	ENGINEER OF BRIDGE DESIGN
	ENGINEER OF BRIDGES AND STRUCTURES

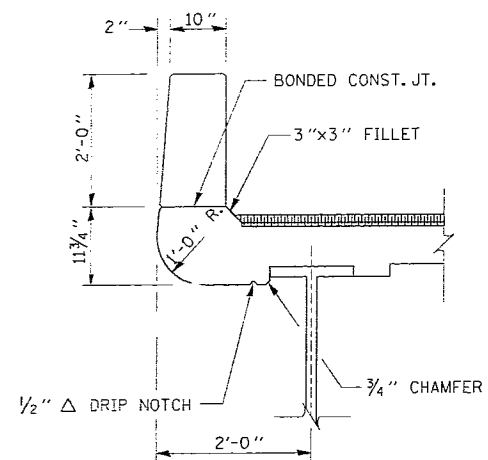
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE & SECTION	DATE	BY	CHKD	APP'D	SHEET NO.
57 * IROQUOIS 127 115					12 SHEETS
PREPARED BY	DESIGNED BY	CHECKED BY	APPROVED BY		

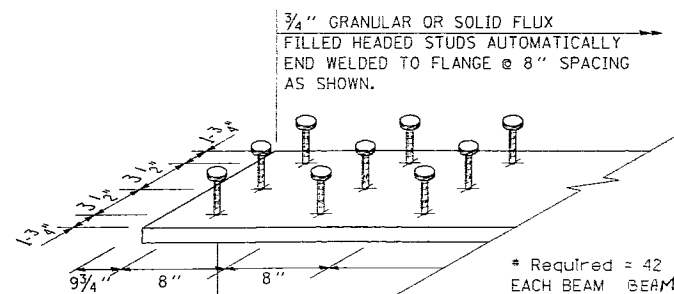
* (38-5)RS-1



**EXPANSION JOINT &
DECK DETACHMENT REPAIR**



CURB DETAIL



DETAIL A
TYPICAL REPAIR FOR EACH BEAM

NOTES:

1. THE LIMITS OF ALL CONCRETE REMOVAL SHALL BE SAW CUT 3/4" INTO CONCRETE.
2. EXISTING LONGITUDINAL BARS IN DECK AND VERTICAL BARS IN ABUTMENT BACKWALL EXTENDING INTO THE REMOVED AREA SHALL BE CLEANED, STRAIGHTENED, AND INCORPORATED INTO THE NEW CONSTRUCTION.
3. EXISTING PARAPET REINFORCEMENT EXTENDING INTO THE REMOVED AREA SHALL BE CLEANED, STRAIGHTENED AND INCORPORATED INTO THE NEW CONSTRUCTION.
4. THE REMOVAL AND REPLACEMENT OF CONCRETE AT THE ABUTMENT BACKWALL, PARAPET, AND DECK WILL BE PAID FOR AS CONCRETE REMOVAL AND CONCRETE SUPERSTRUCTURE.
5. THE PARAPET SHALL BE REMOVED ON THE DECK SIDE, BUT SHALL REMAIN IN PLACE ON THE ABUTMENT SIDE. CONCRETE REMOVAL AT THE ABUTMENT SHALL BE FROM FACE OF PARAPET TO FACE OF PARAPET.
6. THE REMOVAL OF THE EXISTING EXPANSION JOINT MATERIAL AND THE STEEL ARMOUR SHALL BE INCLUDED IN THE COST OF "CONCRETE REMOVAL."
7. THE ALUMINUM HANDRAIL MAY HAVE TO BE PARTIALLY REMOVED DURING CONSTRUCTION. THE COST OF THIS REMOVAL, MOVEMENT OF RAIL POSTS, AND ADJUSTMENT ON RAIL LENGTH SHALL BE INCLUDED IN THE COST OF "CONCRETE REMOVAL."

STRUCTURE REHABILITATION
FAI 57 (RTE 57)
SECTION (38-5)RS-1
IROQUOIS COUNTY
S.N. 038-0008
STA. 585 + 10.21

DESIGNED	19
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. 4
57	*	PROQUOIS	127 116	12 SHEETS
FED. ROAD DIST. NO.	CLASS.	FED. RD. PROJECT		

Technical drawing showing a cross-section of a bridge approach pavement structure. The drawing includes the following components and dimensions:

- Bridge Approach Pavement (Std. 420401)**: The main pavement layer.
- Back of Abut.**: The vertical boundary on the left side.
- 5'-11 1/8" N ABUT. EB & WB**: North abutment width.
- 6'-11" S. ABUT. EB & WB**: South abutment width.
- PGE**: Porous Granular Embankment.
- 45°**: Slope angle of the embankment.
- varies 1'-6" to 2'-0"**: Variable dimension for the embankment slope.
- 6" perforated drain pipe**: Located within the embankment.
- approximate 2' x 2' block of CA-5 or CA-7 coarse aggregate**: Material surrounding the drain pipe.
- The 2' x 2' block of coarse aggregate shall be wrapped completely in geotechnical fabric for French drains.**
- An 18" minimum lap will be used where the fabric must be lapped.**
- Cost included with "Porous Granular Embankment".**
- Bonded Constr. Jt.**: Bonded construction joint.
- Dimensions**:
 - 6" 1'-0"
 - U(E)
 - V₂(E)
 - M(E)
 - V₁(E)
 - 1 1/2" cl.
 - *V(E)
 - 1 1/2" cl.
 - V₃(E)
 - 1'-3" min. Lap
 - h(E)
 - 9" min.
 - 3'-6" min.
 - 3'-3"
 - 4'-3"
- See Silicone Joint Seal (Detail B, SEE SHEET 20F 12)**: Reference to a detail for the joint seal.
- Existing vertical reinforcement bars shall be cut 2'-0" above the abutment seal**: Note regarding reinforcement bars.

Approach Slab Removal or Pavement Removal

Concrete Removal

Structure Excavation and Porous Granular Embankment

Embankment depth max.

2'-0" min.

2'-0"

17'-6"

11'-6"

10'-0" Bridge Approach
Pav't. Connector (PCC)

40'-0" Bridge Approach
Pavement Connector (PCC)

4" P.J.S. or Neoprene Expansion Jt.

2 3/4" at 50° F

40'-0" Pavement Width

20' Stage I Construction
(Abutment Wall)

20' Stage II Construction
(Abutment Wall)

20 #5 1/2" E bars at 12" cts.

20 #5 1/2" E bars at 12" cts.

6" E Roadway

Place cap or filter fabric on ends of Blue Gravel

2'-6"

Stage Removal and Stage Construction Line (Abutment Wall)

20 Stage I Construction (Abutment Wall)

20-#6 v(E) bars at 12" cts. (Back Face)

2-#6 h(E) bars

6-#6 h(E) bars (Each Face)

1/8" typ.

slope to drain

20-#6 v(E) bars at 12" cts. (Back Face)

20-#6 v(E) bars at 12" cts. (Front Face)

20 Stage II Construction (Abutment Wall)

20-#6 v(E) bars at 12" cts. (Back Face)

2-#6 h(E) bars

Stage Removal and Stage Construction Line (Abutment Wall)

5-#6(E) Bar Splices (Each Face)

6-#6 h(E) bars (Each Face)

1/4" typ.

slope to drain

20-#6 v(E) bars at 12" cts. (Back Face)

20-#6 v(E) bars at 12" cts. (Front Face)

[illegible]

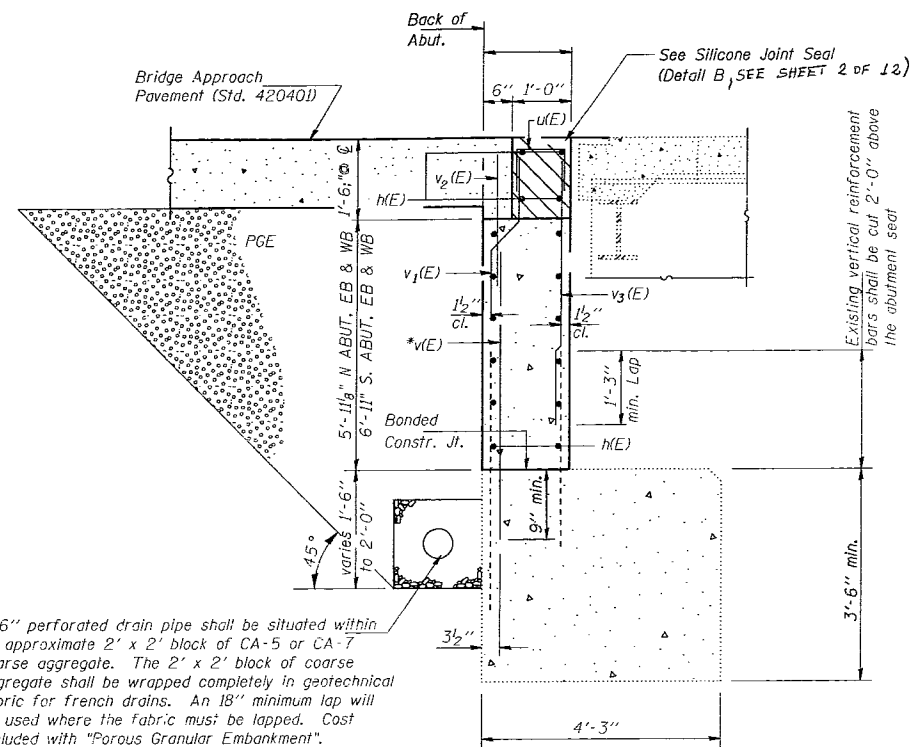
**STRUCTURE REHABILITATION
BACKWALL REPLACEMENT
NORTH ABUTMENT
FAI 57 (RTE 57)
SECTION (38-5)RS-1
IROQUOIS COUNTY
S.N. 038-0008
STA. 585 + 10.21**

FEB. 25, 2000
\EP02099\BRDGEDET.DGN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	DATE	SHEET NO.
57	*	IROQUOIS	127	117
12 SHEETS				

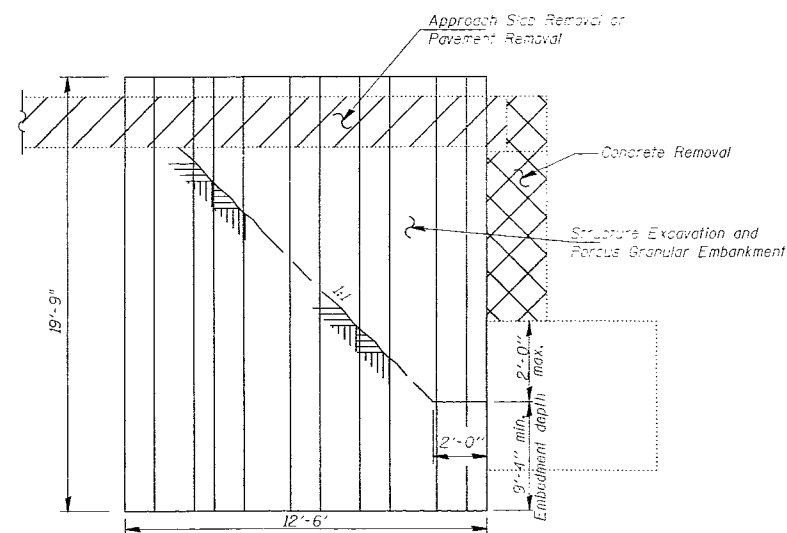
*(38-5)RS-1



SEC. THRU PROPOSED ABUT.

DRILL AND GROUT v (E) BAR IN 1" Ø X 9" (MIN.) DRILLED HOLES
ACCORDING TO SECTION 584 OF THE STANDARD SPECIFICATIONS.
COST INCLUDED IN COST OF "REINFORCEMENT BARS, EPOXY COATED".

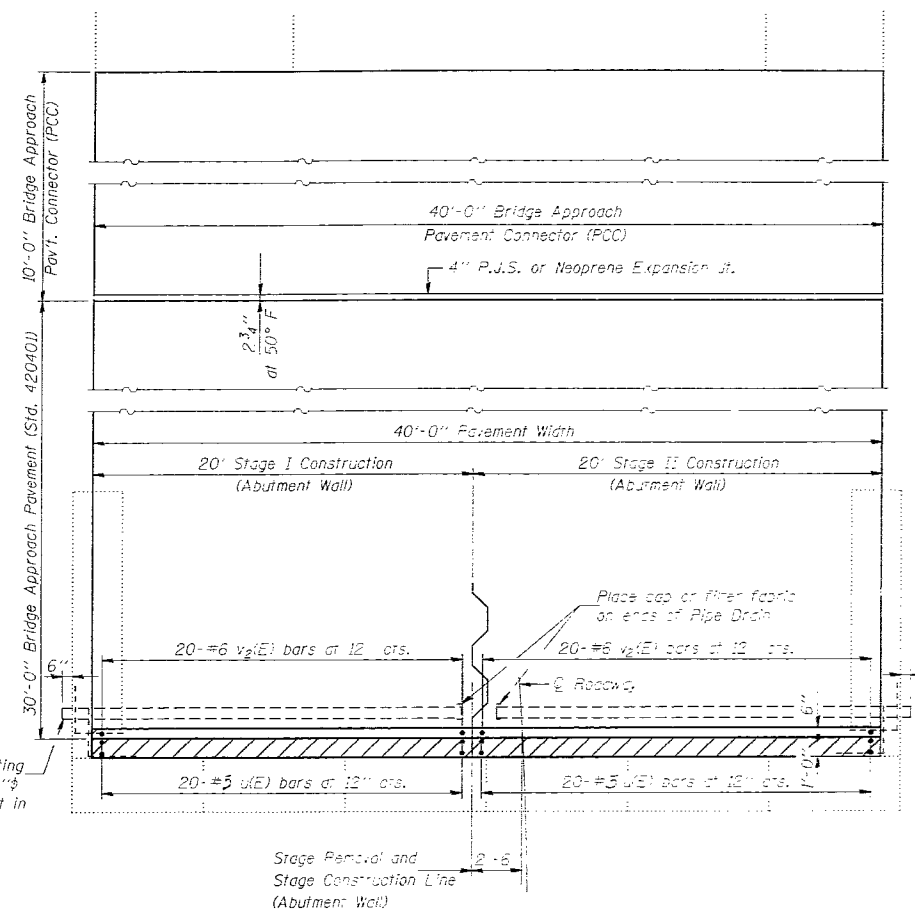
NOTE: Hatched area shall be poured after forms for the remaining part of the abutment have been removed.



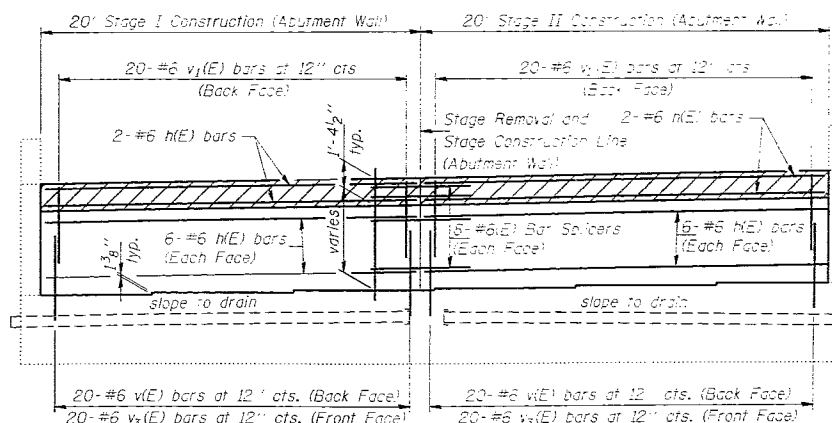
SHEET PILING DETAIL

Sheet Piling minimum section modulus = 9.1 cu. in./ft. of wall.
If the Contractor chooses, after the porous granular embankment has been placed behind the abutment wall constructed during Stage II, the sheet piling may be cut at an elevation 6" below the proposed Approach Pavement and left in place.

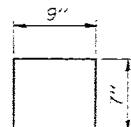
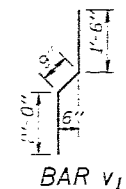
NOTE: "If the contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans for lesser design requirements, then full design submittals with the required seals will be expected by the Department, for review and approval."



PROPOSED PLAN



PROPOSED ELEVATION



BILL OF MATERIAL

Bar No.	Size	Length	Stage
v1(E)	#6	5'-0"	1
v2(E)	#6	4'-3"	1
v3(E)	#6	3'-0"	1
v4(E)	#6	6'-0"	1
v5(E)	#6	12'-0"	1
v6(E)	#6	12'-0"	1
v7(E)	#6	12'-0"	1
v8(E)	#6	12'-0"	1
v9(E)	#6	12'-0"	1
v10(E)	#6	12'-0"	1
v11(E)	#6	12'-0"	1
v12(E)	#6	12'-0"	1
v13(E)	#6	12'-0"	1
v14(E)	#6	12'-0"	1
v15(E)	#6	12'-0"	1
v16(E)	#6	12'-0"	1
v17(E)	#6	12'-0"	1
v18(E)	#6	12'-0"	1
v19(E)	#6	12'-0"	1
v20(E)	#6	12'-0"	1
v21(E)	#6	12'-0"	1
v22(E)	#6	12'-0"	1
v23(E)	#6	12'-0"	1
v24(E)	#6	12'-0"	1
v25(E)	#6	12'-0"	1
v26(E)	#6	12'-0"	1
v27(E)	#6	12'-0"	1
v28(E)	#6	12'-0"	1
v29(E)	#6	12'-0"	1
v30(E)	#6	12'-0"	1
v31(E)	#6	12'-0"	1
v32(E)	#6	12'-0"	1
v33(E)	#6	12'-0"	1
v34(E)	#6	12'-0"	1
v35(E)	#6	12'-0"	1
v36(E)	#6	12'-0"	1
v37(E)	#6	12'-0"	1
v38(E)	#6	12'-0"	1
v39(E)	#6	12'-0"	1
v40(E)	#6	12'-0"	1
v41(E)	#6	12'-0"	1
v42(E)	#6	12'-0"	1
v43(E)	#6	12'-0"	1
v44(E)	#6	12'-0"	1
v45(E)	#6	12'-0"	1
v46(E)	#6	12'-0"	1
v47(E)	#6	12'-0"	1
v48(E)	#6	12'-0"	1
v49(E)	#6	12'-0"	1
v50(E)	#6	12'-0"	1
v51(E)	#6	12'-0"	1
v52(E)	#6	12'-0"	1
v53(E)	#6	12'-0"	1
v54(E)	#6	12'-0"	1
v55(E)	#6	12'-0"	1
v56(E)	#6	12'-0"	1
v57(E)	#6	12'-0"	1
v58(E)	#6	12'-0"	1
v59(E)	#6	12'-0"	1
v60(E)	#6	12'-0"	1
v61(E)	#6	12'-0"	1
v62(E)	#6	12'-0"	1
v63(E)	#6	12'-0"	1
v64(E)	#6	12'-0"	1
v65(E)	#6	12'-0"	1
v66(E)	#6	12'-0"	1
v67(E)	#6	12'-0"	1
v68(E)	#6	12'-0"	1
v69(E)	#6	12'-0"	1
v70(E)	#6	12'-0"	1
v71(E)	#6	12'-0"	1
v72(E)	#6	12'-0"	1
v73(E)	#6	12'-0"	1
v74(E)	#6	12'-0"	1
v75(E)	#6	12'-0"	1
v76(E)	#6	12'-0"	1
v77(E)	#6	12'-0"	1
v78(E)	#6	12'-0"	1
v79(E)	#6	12'-0"	1
v80(E)	#6	12'-0"	1
v81(E)	#6	12'-0"	1
v82(E)	#6	12'-0"	1
v83(E)	#6	12'-0"	1
v84(E)	#6	12'-0"	1
v85(E)	#6	12'-0"	1
v86(E)	#6	12'-0"	1
v87(E)	#6	12'-0"	1
v88(E)	#6	12'-0"	1
v89(E)	#6	12'-0"	1
v90(E)	#6	12'-0"	1
v91(E)	#6	12'-0"	1
v92(E)	#6	12'-0"	1
v93(E)	#6	12'-0"	1
v94(E)	#6	12'-0"	1
v95(E)	#6	12'-0"	1
v96(E)	#6	12'-0"	1
v97(E)	#6	12'-0"	1
v98(E)	#6	12'-0"	1
v99(E)	#6	12'-0"	1
v100(E)	#6	12'-0"	1

Reinforcement bars designated (E) shall be epoxy coated.

STRUCTURE REHABILITATION
BACKWALL REPLACEMENT
SOUTH ABUTMENT
FAI 57 (RTE 57)
SECTION (38-5)RS-1
IROQUOIS COUNTY
S.N. 038-0008
STA. 585+10.21

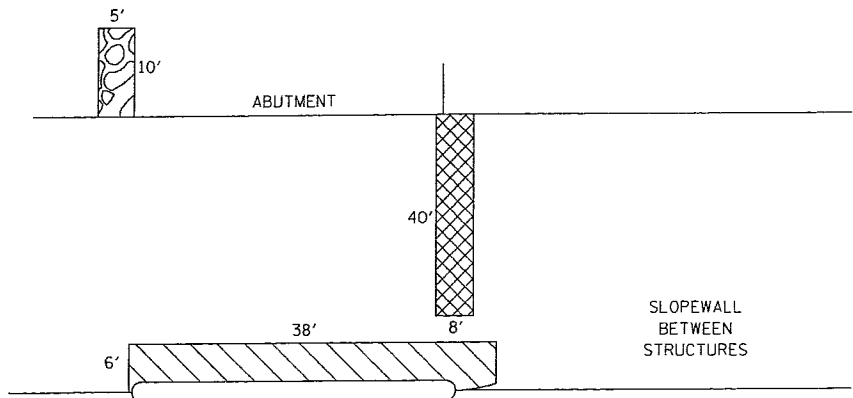
DESIGNED	19
CHECKED	
DRAWN	
CHECKED	

EXAMINED	ENGINEER OF BRIDGE DESIGN
PASSED	ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

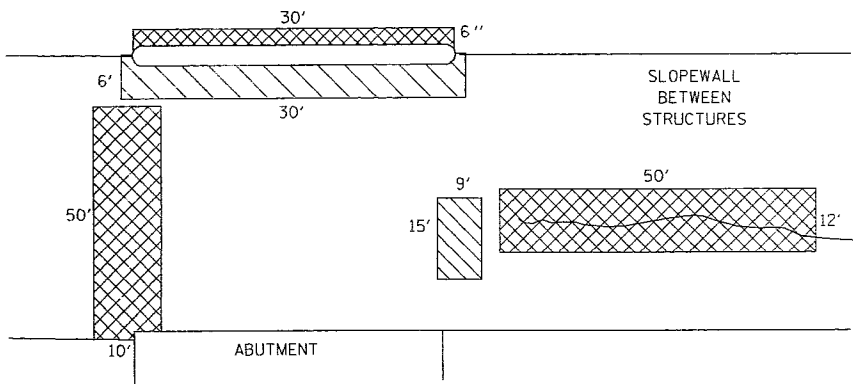
ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
57	*	IROQUOIS	12/11/00	12 SHEETS
PROJECT NO. 038-5/RS-1				

*38-5/RS-1



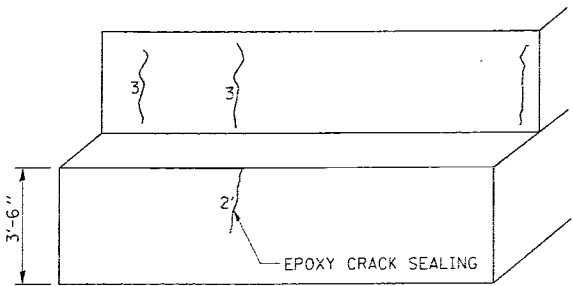
NORTH SLOPEWALL

- SLOPEWALL REMOVAL = 26 SQ YD
- SLOPEWALL 4" = 26 SQ YD
- STONE DUMPED RIPRAP, CLASS A4 = 6 SQ YD
- SLOPEWALL SLURRY PUMPING = 25 CU YD



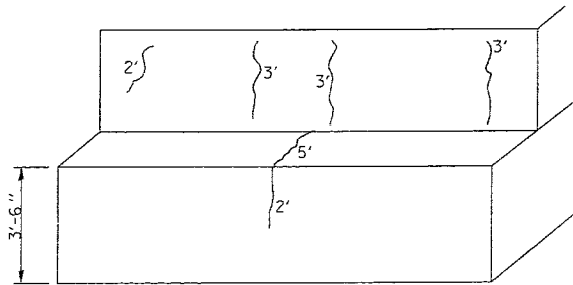
SOUTH SLOPEWALL

- SLOPEWALL REMOVAL = 40 SQ YD
- SLOPEWALL 4" = 40 SQ YD
- SLOPEWALL SLURRY PUMPING = 70 CU YD



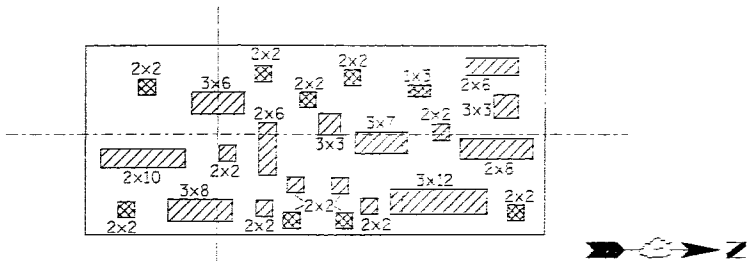
NORTH ABUTMENT & BACKWALL

EPOXY CRACK SEALING = 2'



SOUTH ABUTMENT & BACKWALL

EPOXY CRACK SEALING = 7'



TOP OF DECK

- DECK SLAB REPAIR (PARTIAL DEPTH) = 35 SQ YD
- DECK SLAB REPAIR (FULL DEPTH, TYPE D) = 5 SQ YD

BILL OF MATERIALS	
ITEM	QUANTITY
DECK SLAB REPAIR (PARTIAL DEPTH)	35 SQ YD
DECK SLAB REPAIR (FULL DEPTH, TYPE D)	5 SQ YD
EPOXY CRACK SEALING	9 FOOT
STONE DUMPED RIPRAP, CLASS A4	6 SQ YD
FILTER FABRIC FOR USE WITH RIPRAP	6 SQ YD
SLOPEWALL SLURRY PUMPING	95 CU YD
SLOPEWALL REMOVAL	66 SQ YD
SLOPEWALL 4"	66 SQ YD

NOTE

Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs in "As Built" plans.

STRUCTURE REHABILITATION
FAI 57 (RTE 57)
SECTION (38-5)RS-1
IROQUOIS COUNTY
S.N. 038-0008
STA. 585 + 10.21

DATE OF SURVEY 01-10-00

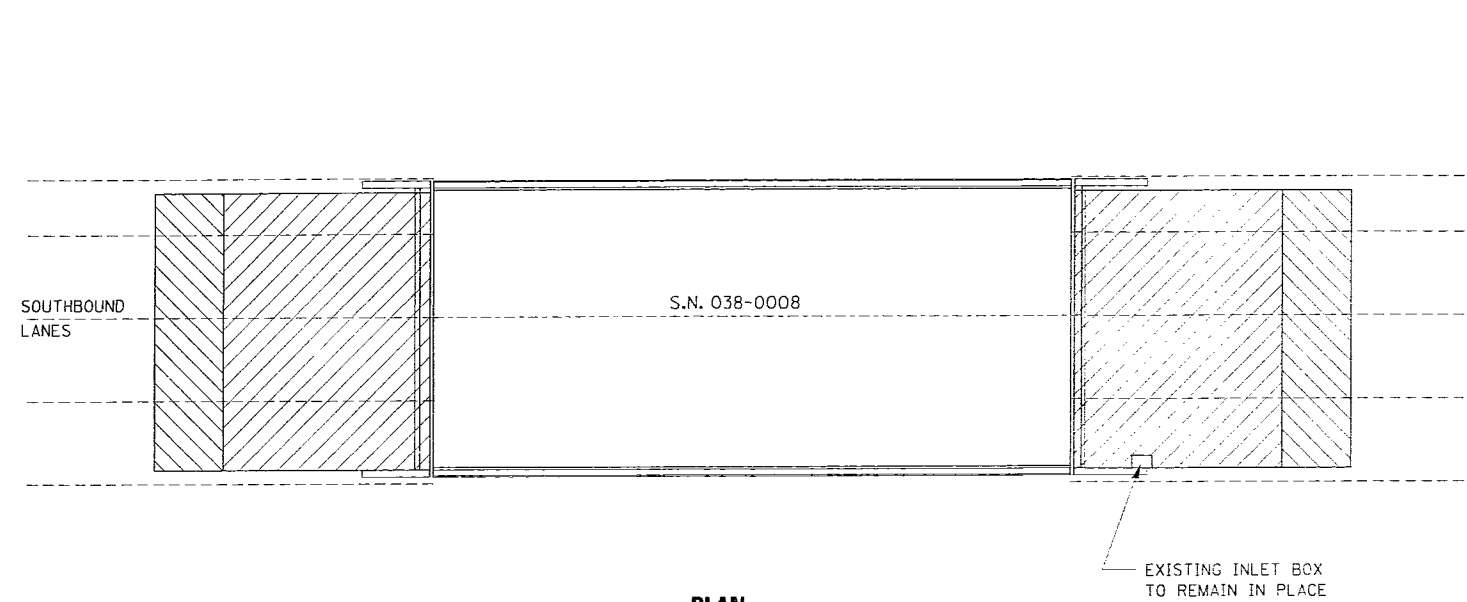
DESIGNED	19
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	

ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	7
57	*	IROQUOIS	127	119
12 SHEETS				
* (38-5)RS-1				

2-4-0-4



LEGEND

	BRIDGE APPROACH PAVEMENT
	BRIDGE APPROACH PAVEMENT CONNECTOR (PCO)

BILL OF MATERIALS	
ITEM	QUANTITY
BRIDGE APPROACH PAVEMENT	267 SQ YD
APPROACH SLAB REMOVAL	356 SQ YD
BRIDGE APPROACH PAVEMENT CONNECTOR (PCO)	69 SQ YD
BAR SPLICERS	62 EACH

NOTE: SAWCUT AROUND THE EXISTING DRAIN, DRILL NEW HOLES AND EPOXY GROUT NEW BARS INTO THE INLET BOX. COST SHALL BE INCIDENTAL TO "APPROACH SLAB REMOVAL."

DESIGNED
CHECKED
DRAWN
CHECKED

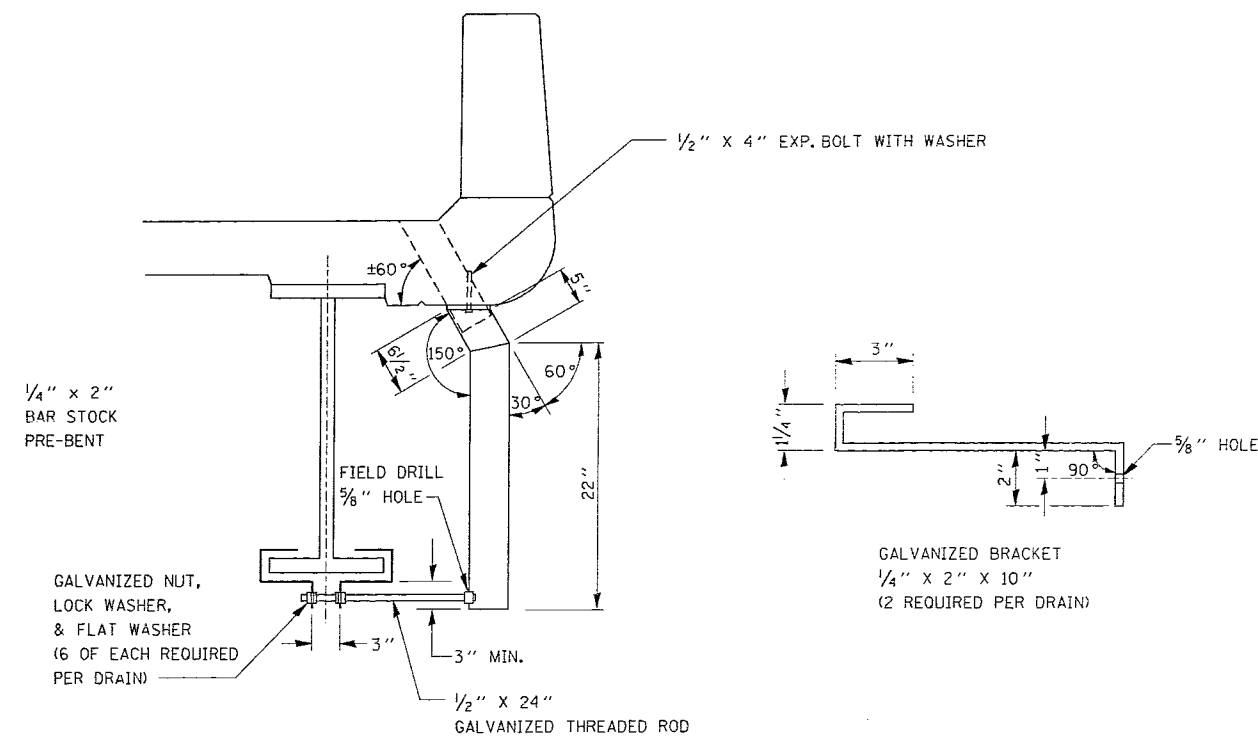
19
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

STRUCTURE REHABILITATION
FAI 57 (RTE 57)
SECTION (38-5)RS-1
IROQUOIS COUNTY
S.N. 038-0008
STA. 585+10.21

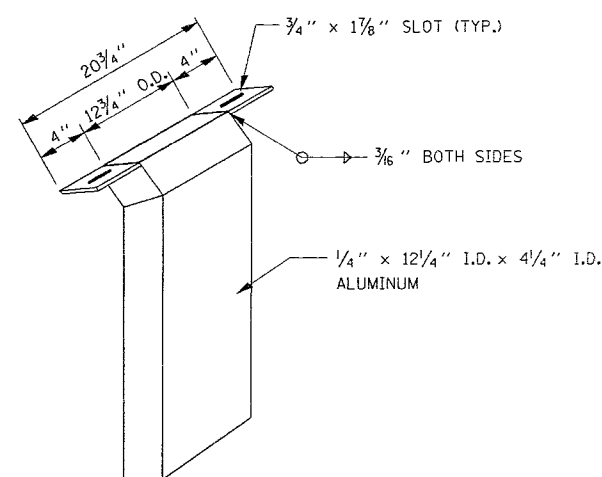
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SPAN	POST	SHEET NO.
57	*	IROQUOIS	127	120	8
12 SHEETS					

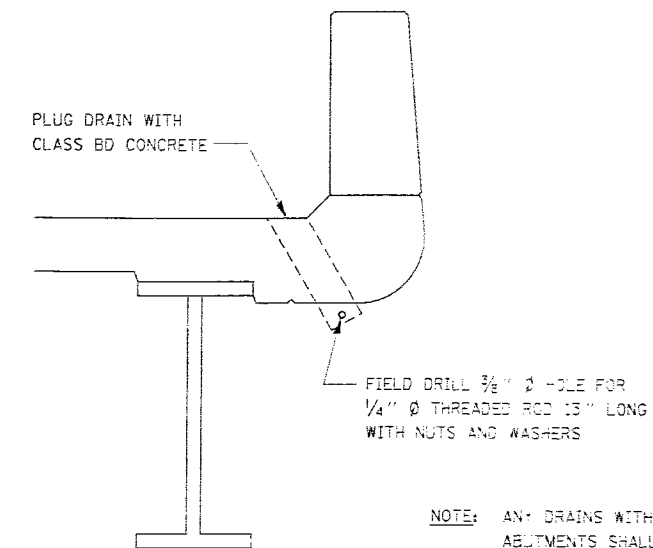
* (38-5)RS-1



BRACKET DETAIL



DECK DRAIN EXTENSION



NOTE: ANY DRAINS WITHIN 10' OF THE PIER AND ABUTMENTS SHALL BE ELIMINATED. SPACING BETWEEN DRAINS SHALL BE DOUBLED BY PLUGGING EVERY OTHER EXISTING DRAIN.

**SECTION AT DRAIN
DRAIN ELIMINATION DETAIL**

BILL OF MATERIAL

ITEM	QTY	UNIT
FLOOR DRAIN EXTENSIONS	EA	8
PLUG EXISTING DECK DRAINS	EA	12

DESIGNED	19
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	ENGINEER OF BRIDGES AND STRUCTURES

STRUCTURE REHABILITATION
FAI 57 (RTE 57)
SECTION (38-5)RS-1
IROQUOIS COUNTY
S.N. 038-0008
STA. 585 + 10.21

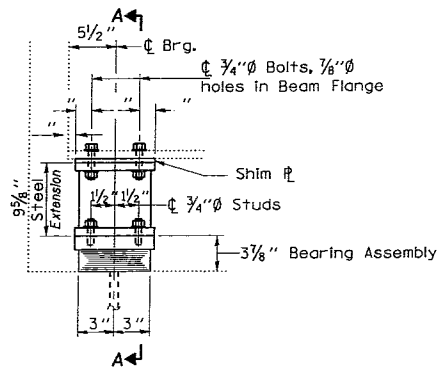
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STATE NO.	SECTION	DATE	REV	SHEET NO.
67	*	10/20/05	127	121
SHEET NO. 9				12 SHEETS

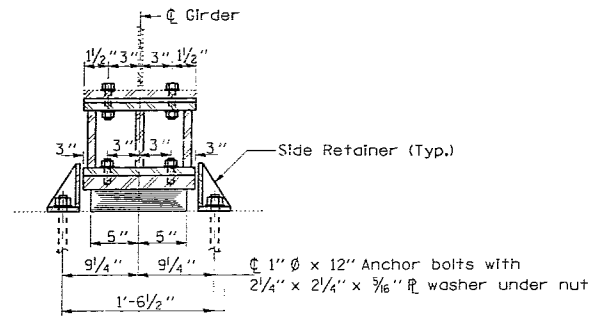
GIRDER REACTIONS

RE	(K)	11.1
RL	(K)	27.4
Imp.	(K)	8.2
R (Total)	(K)	46.7

* (38-5)PS-1

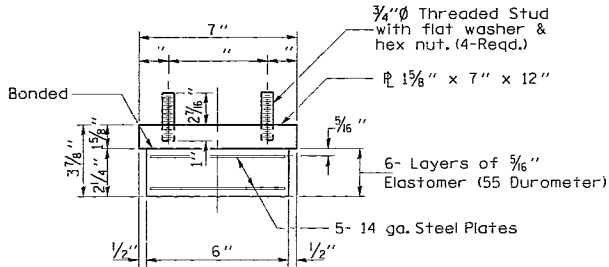


ELEVATION AT
SOUTH ABUTMENT



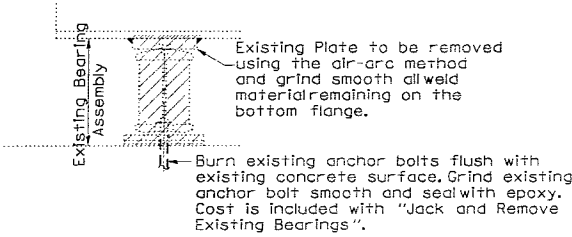
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

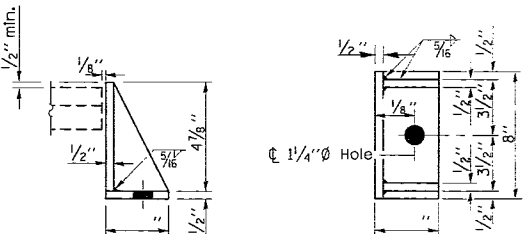


BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



EXISTING BEARING REMOVAL DETAIL

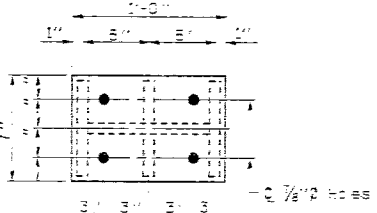


SIDE RETAINER

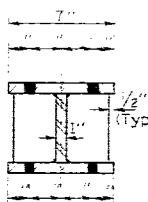
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Notes: Diaphragm removal and replacement may be required to facilitate drilling holes. Cost shall be included in the cost of "Furnishing and Erecting Structural Steel".
New steel extensions, side retainers, shim plates, connection bolts, and anchor bolts are included in "Furnishing and Erecting Structural Steel".
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
Min. Jack capacity = 22 Tons
Two 1/8" shims of the dimensions of the top extension plate shall be provided for each bearing in addition to all other plates or shims.

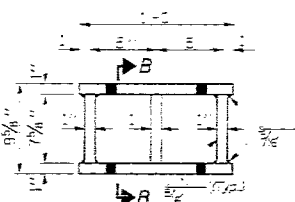
See Sheet 12 of 12 for Anchor Bolt Installation.



PLAN TOP AND BOTTOM PLATE



SECTION B-B



STEEL EXTENSION DETAIL

ADDITIONAL SOLID 1 PIECE SHIMS REQUIRED

Beam #1	2	3	4	5	6	7
0	0	0	1/2	1/2	0	0

BEAM 1	
2	
3	
4	
5	
6	
7	

BILL OF MATERIAL		
Item	Unit	Total
Elastomeric Bearing	Each	1
Assembly type I	Each	1
Furnishing & Erecting	Each	1
Structural Steel	Sq. Ft.	1
Jack & Remove	Each	1
Exist. Bearings	Each	1

TYPE I
BEARING REPLACEMENT
SOUTH ABUTMENT
S.N. 038-0008
STA. 585 + 10.21

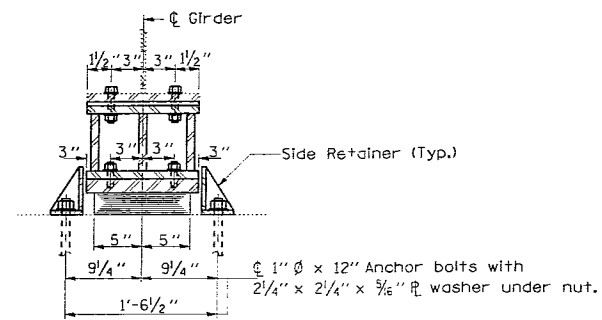
DESIGNED	
CHECKED	
DRAWN	
CHECKED	

EXAMINED	19
PASSED	ENGINEER OF BRIDGE DESIGN
	ENGINEER OF BRIDGES AND STRUCTURES

ROUTE NO.	RETRY	DATE	TIME	SHEET NO. 10
37 *	IRROQUOIS	127	122	12 SHEETS
FEEL WIND DIR., NO. 7	CLIMAX	FEEL AIR PRESSURE		

* (38-51RS-1

RE	(K)	11.1
RL	(K)	27.4
Imp.	(K)	8.2
R (Total)	(K)	46.7



SECTION A-A

Notes: Diaphragm removal and replacement may be required to facilitate drilling holes. Cost shall be included in the cost of "Furnishing and Erecting Structural Steel".

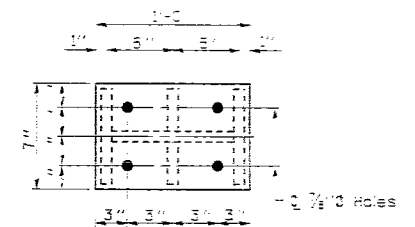
New steel extensions, side retainers, shim P's, connection bolts, and anchor bolts are included in "Furnishing and Erecting Structural Steel".

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

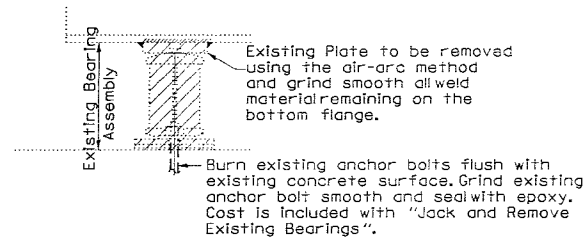
Min. jack capacity = 22 Tons

Two $\frac{1}{8}$ " shims of the dimensions of the top extension plate shall be provided for each bearing in addition to all other plates or shims.

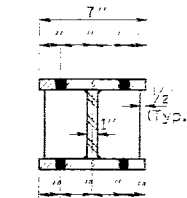
See Sheet 12 of 12 for Anchor Bolt Installation.



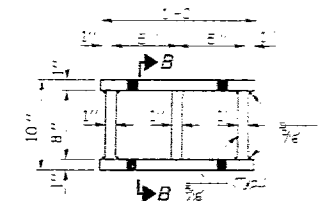
PLAN TOP AND BOTTOM PLATE



EXISTING BEARING REMOVAL DETAIL

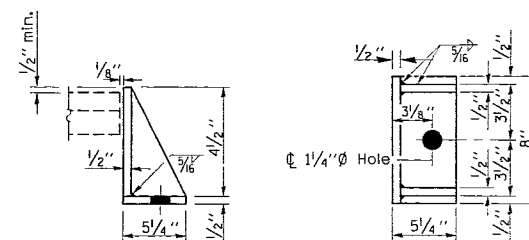


SECTION B-B



STEEL EXTENSION DETAIL

Note: Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER

Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.

DESIGNED
CHECKED
DRAWN
CHECKED

19

EXAMINED

PASSED

ENGINEER OF BRIDGE DESIGN

ENGINEER OF BRIDGES AND STRUCTURES

ADDITIONAL SOLID 1 PIECE SHIMS REQUIRED							
Beam #1	2	3	4	5	6	7	
0	0	0	1/8"	1/4"	0	0	

BEAM 1

BEAM 2

BILL OF MATERIAL			
Item	Unit	Total	
Elastomeric Bearing			
Assembly Type I	EACH		
Furnishing & Erecting			
Structural Steel	LB.		1000
Jack & Remove			
Exist. Bearings	EACH		

**TYPE I
BEARING REPLACEMENT
NORTH ABUTMENT
S.N. 038-0008
STA. 585 + 10.21**